UAPcamf
587

"AJAX" PUMPS

FOR ALL PURPOSES

P5

No P40

McPherson's
Proprietary Limited
PUMP SPECIALISTS

N
621.6
M172

PROFITABLE PUMPING

Probably with no other equipment for the Agriculturist is there such an urgent necessity for cautious buying as there is with pumping appliances.

Injudicious purchasing may result in having a pump that is really not suitable for the work to be done. The inevitable consequences are loss of time, loss of profits, loss of efficiency generally, or needlessly heavy running costs.

With so many factors to be considered, great care should be exercised always in the purchase of pumps.

This is the service which we are well fitted to offer. Our long experience is at your service, and our experts will safeguard your interests by guiding you in the selection of the most efficient pump for your purpose.

McPherson's
Proprietary Limited

Established 1860

51-65 BATHURST STREET - SYDNEY

554-566 Collins Street - MELBOURNE
116-130 Waymouth Street - ADELAIDE
532 Murray Street - - - - PERTH

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"AJAX" PUMPS—For All Purposes

When ordering pumps please give the following information, and when enquiring it will enable us to advise you (without obligation) the most suitable pump for your requirements.

1. For what main purpose is pump required?
2. Approximate number of gallons required per hour?
3. Is water hot or cold, **clean** or **gritty,** and does it contain any chemical ingredients?
4. **Vertical height** from **lowest summer** level of water to proposed pump site?
5. **Length** and **size** of pipe from water to pump site?
6. **Vertical height** from pump site to highest point of discharge?
7. Length of piping from pump to point of discharge?
8. Are the pipes laid, or have you any on hand which you intend to use? If so, give **sizes** and **lengths.**
9. Would pump be operated by hand, windmill, engine or electric motor? Give voltage of electric supply.
10. If you have an engine or motor which you propose to use, please give make, H.P., **speed** and **pulley** sizes.
11. If pump is required to operate sprinklers, please give number and type of sprinklers and include rough sketch of proposed lay-out.
12. State what pressure is required at end of pipe line for sluicing, etc.
13. It will help us considerably if you submit a **rough sketch** with the above details.

IMPORTANT: Please Note Carefully

THE SUCCESSFUL ACTION of a pump depends, firstly, on the suction pipe joints being absolutely airtight.

TOTAL SUCTION HEAD should never exceed 20 to 25 ft. This may be computed by adding together the vertical height from lowest summer water level to centre of pump and the friction in the suction piping (see table below).

SUCTION PIPES when necessary should always fall from the pump; all air will then pass upwards. When this is not convenient care must be exercised to see that there is no chance of air lodging along the top of the inside of piping. If this may occur it is absolutely essential to fit cocks so that all air may be allowed to escape. When different sizes of horizontal suction piping are used air cocks are generally necessary. The shorter the suction piping the greater the efficiency. Never use elbows, and as few bends as possible.

A FOOTVALVE AND STRAINER is in all cases recommended, and in some instances essential.

DELIVERY PIPES should not be of less diameter than half the bore of the working barrel, and, if of considerable length, larger than this. If delivery pipes are of small diameter, great friction is caused, and much more power than necessary is required to work the pump. For instance, if a 1 in. Single-Stage High Duty "Ajax" Centrifugal Pump is required to pump water 120 ft. vertically through 300 ft. piping, all 2½ in. piping will be required so as to bring the total head within the 125 ft., which is the maximum head for this pump.

Before starting PRIME the Pump by filling it and the suction piping with the Liquid.

THE TABLE HEREUNDER GIVES THE FRICTION LOSS in feet, due to friction, in various sizes of new, smooth, straight cast iron pipes per 100 feet, when discharging the stated quantities per minute.

IMPERIAL GALLONS PER MINUTE	DIAMETER OF PIPE IN INCHES.										
	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	4 in.	5 in.	6 in.	7 in.
5	14.5	3.4	1.2	.45	—	—	—	—	—	—	—
8	—	8.8	2.8	1.1	.27	—	—	—	—	—	—
10	—	13.6	4.5	1.9	.42	—	—	—	—	—	—
15	—	34.0	10.0	4.5	1.0	—	—	—	—	—	—
20	—	54.6	17.9	7.2	1.7	.56	.22	—	—	—	—
30	—	—	40.4	16.2	3.8	1.2	.5	—	—	—	—
40	—	—	—	28.5	6.6	2.2	.9	.21	—	—	—
50	—	—	—	45.0	10.6	3.5	1.4	.33	—	—	—
60	—	—	—	65.0	15.4	5.0	2.0	.48	.15	—	—
70	—	—	—	88.3	21.0	6.8	2.7	.65	.21	—	—
80	—	—	—	—	27.2	8.9	3.6	1.08	.26	.11	—
90	—	—	—	—	34.2	11.2	4.5	1.0	.35	.14	—
100	—	—	—	—	42.6	14.0	5.6	1.3	.43	.17	—
120	—	—	—	—	—	20.2	8.1	1.9	.63	.25	—
140	—	—	—	—	—	27.3	11.0	2.6	.86	.33	—
150	—	—	—	—	96.0	31.5	12.5	3.0	—	—	—
160	—	—	—	—	—	35.9	14.3	3.4	1.1	.45	—
180	—	—	—	—	—	45.0	18.0	4.3	1.4	.56	—
200	—	—	—	—	—	56.1	22.5	5.3	1.7	.70	.32
250	—	—	—	—	—	87.0	35.0	8.3	2.7	1.1	.51
300	—	—	—	—	—	126.0	50.8	12.0	3.9	1.6	.72

SALES TAX, WHERE APPLICABLE, MUST BE ADDED TO ALL PRICES ON THIS PAGE

Table showing head of water in feet and approximate discharge in gallons per minute for lines of piping half-inch bore to 6in. bore, allowing for an average number of bends and fittings.

PART I.—This gives approximate Discharge under a Head of from 1 ft. to 500 ft. for Pipe Line, 1,000 ft. in length.

Head (or Fall) in Feet.	Discharge in Gallons per Minute. Internal Diameter of Pipe. ½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	5 in.	6 in.	Head (or Fall) in Feet.
1	.16	.45	.93	1.63	2.57	5.28	9.22	14.5	21.3	29.8	52.1	82.2	1
2	.23	.64	1.32	2.30	3.63	7.46	13.0	20.5	30.1	42.1	73.6	116.0	2
4	.33	.91	1.87	3.26	5.14	10.6	18.4	29.1	42.7	59.6	104.0	164.0	4
6	.40	1.11	2.29	3.98	6.29	12.9	22.5	35.5	52.2	73.0	127.0	201.0	6
9	.49	1.36	2.80	4.88	7.71	15.9	27.7	43.6	64.1	89.5	156.0	246.0	9
12	.57	1.57	3.25	5.64	8.90	18.3	32.0	50.4	74.0	103.0	180.0	285.0	12
16	.66	1.81	3.73	6.51	10.3	21.1	36.9	58.1	85.4	119.0	208.0	329.0	16
20	.74	2.03	4.18	7.28	11.5	23.6	41.2	64.9	95.4	133.0	233.0	367.0	20
25	.82	2.27	4.67	8.14	12.9	26.4	46.1	72.6	106.0	149.0	260.0	411.0	25
30	.90	2.48	5.11	8.92	14.1	28.8	50.5	79.5	116.0	163.0	285.0	450.0	30
40	1.04	2.88	5.91	10.3	16.3	33.5	58.3	92.0	135.0	188.0	329.0	520.0	40
50	1.16	3.21	6.61	11.5	18.2	37.4	65.2	102.0	150.0	210.0	368.0	581.0	50
75	1.42	3.93	8.10	14.1	22.3	45.7	79.9	125.0	184.0	258.0	451.0	712.0	75
100	1.65	4.55	9.35	16.3	25.7	52.8	92.2	145.0	213.0	298.0	521.0	822.0	100
150	2.03	5.59	11.5	19.9	31.5	64.9	113.0	178.0	262.0	366.0	637.0	1011.0	150
200	2.33	6.42	13.2	23.0	36.3	74.6	130.0	205.0	301.0	421.0	736.0	1161.0	200
250	2.61	7.20	14.8	25.7	40.7	83.7	146.0	230.0	337.0	471.0	824.0	1303.0	250
500	3.69	10.20	20.9	36.4	57.5	118.0	206.0	325.0	476.0	667.0	1164.0	1840.0	500

2

PART 2.—The figure taken from Part 1 must be multiplied by a suitable factor chosen from the following Table:—

Length in feet	50	100	150	200	300	400	500	750	1000	1250	1500
Factor	4.47	3.16	2.58	2.237	1.827	1.580	1.414	1.154	1.0	.895	.817
Length in feet	1750	2000	2500	3000	4000	5000	7500	10000	5 miles	10 miles	50 miles
Factor	.756	.707	.633	.577	.500	.447	.365	.316	.195	.138	.0616

Example.—Required—Approximate Discharge of a line of piping 4 in. bore, 5,000 ft. long, under 30 ft. head. Approximate Discharge for the 1,000 ft. line from Part 1. is 163 gallons per minute. Factor from Part 2 is .447. So that approximate Discharge will be 163 x .447, which is 72.9 gallons per minute.

Approx. Number of Gallons per Hour Pumped by Single Acting Plunger Pumps at 30 Strokes per Minute. For Double Acting Pumps Double Number Below.

Internal diameter of pump cylinder.

Stroke of Pump.	1½ in.	1¾ in.	2 in.	2¼ in.	2½ in.	2¾ in.	3 in.	3¼ in.
4	—	—	80	101	127	154	180	210
5	57	78	100	126	157	192	225	262
6	69	94	120	151	190	231	270	315
	3½ in.	3¾ in.	4 in.	4½ in.	5 in.	6 in.	7 in.	8 in.
4	250	—	325	410	500	725	—	1300
5	310	355	400	510	625	900	—	1625
6	375	430	480	615	750	1080	1500	1960

For longer strokes double or treble as case may be.

A deduction of 5 per cent. to 15 per cent. should be made for slip depending on condition of pump

When Ordering Pumps, please give the Information requested on page 1.

K1—

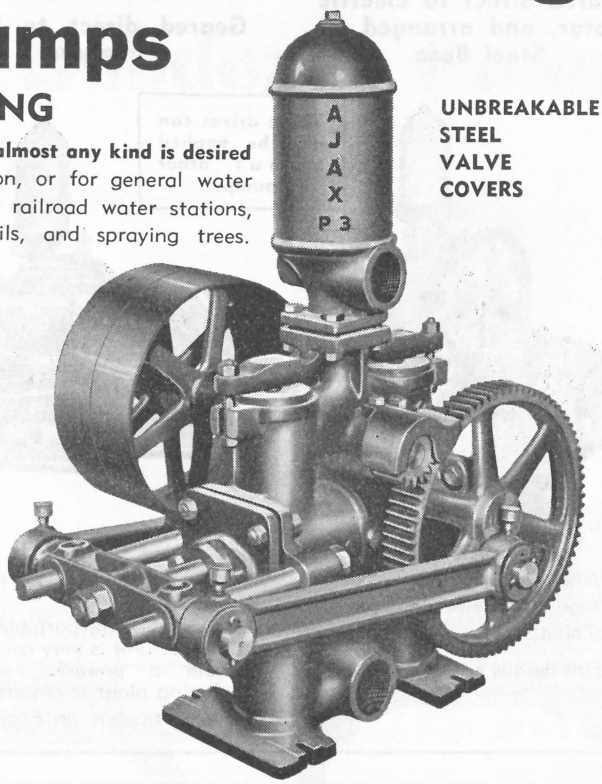
"AJAX" Double-Acting Piston Pumps

BALL BEARING

Offers an ideal outfit where pumping of almost any kind is desired up to 100 lb. pressure or 250 ft. elevation, or for general water supply, including tank pumping for farms, railroad water stations, long-distance pumping, irrigation, light oils, and spraying trees.

On this Pump the base, cylinder, bearings, and one cylinder head are cast in one. Casting the bearings as a part of the cylinder keeps the gearing absolutely in line, greatly decreasing the wear, and proportionately increasing the life of the Pump. The cylinder has a solid brass liner, which is a distinct improvement on the thin liner of other makes of similar Pumps, and is provided with large Gunmetal valves, seats and spring loaded hard rubber valves. These valves are easily accessible through four hand holes, the steel covers of which can be removed by backing off bolts. Can be supplied with ball valves.

Card of Installing and Working Instructions supplied with each Pump.



UNBREAKABLE STEEL VALVE COVERS

3

Series Number	Piston Diam. and Stroke	Pipe Connection	Gallons per hour 200 R.P.M. (app.)	Gallons per hour 250 R.P.M. (app.)	Fast and Loose Pulleys	Approx. Nett Weight Lbs.	Price
P2	2½ x 4	1¼	336	421	8 x 2½	150	£17/15/-
P3	3 x 5	1½	600	750	15 x 2½	301	£22/10/-
P4	4 x 5	2	1100	1380	15 x 3	346	£26/5/-
P5	5 x 5	2½	1550	1936	16 x 4	529	£34/-/-
P6	6 x 6	3	2880	3600	16 x 4	700	£51/-/-

Larger or smaller pulleys may be fitted. Piping smaller than the delivery connections may be used.

POWER TABLE FOR "AJAX" DOUBLE ACTING PISTON PUMPS.

Horsepower	2½ in. x 4 in.		3 in. x 5 in.		4 in. x 5 in.		5 in. x 5 in.		6 in. x 6 in.	
Strokes per minute	40	50	40	50	40	50	40	50	40	50
G.P.H.	336	421	600	750	1100	1380	1550	1936	2880	3600

MAXIMUM HEADS (inc. friction) FOR VARIOUS SIZE MOTORS OR ENGINES.

	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
½ H.P. ...	140	110	80	60	—	—	—	—	—	—
¾ H.P. ...	210	170	110	90	60	50	40	30	—	—
1 H.P.	250	230	160	130	80	70	60	50	—	—
1½ H.P.	—	250	250	200	130	100	90	70	50	40
2 H.P. ...	—	—	—	250	170	140	120	100	60	50
2¾ H.P. ...	—	—	—	—	250	200	170	140	90	70
3 H.P. ...	—	—	—	—	—	210	190	150	100	80
5 H.P.	—	—	—	—	—	250	—	255	175	140
7½ H.P.	—	—	—	—	—	—	—	—	260	210

NOTE.—Gallons per hour shown are the piston displacement of the various size Pumps at 50 strokes per minute. Actual discharges will be approximately 10 per cent. less than this.

When Ordering Pumps, please give the Information requested on page 1.

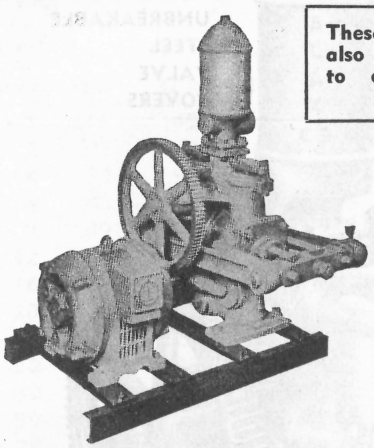
"AJAX" Piston Pump Outfits

Geared direct to Electric Motor, and arranged on Steel Base.

Geared direct to Petrol Engine

With Vee Belt Drive, and arranged on Steel Base.

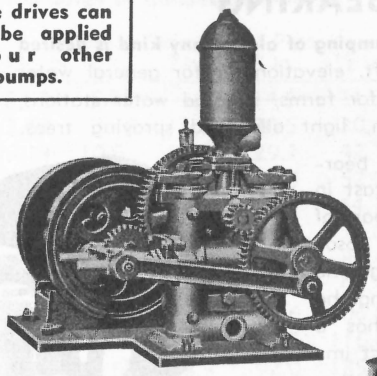
These drives can also be applied to our other pumps.



K2

When inquiring please advise voltage of electric current available.

Full details on request.

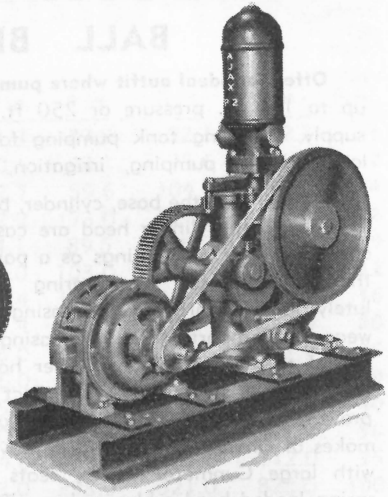


K3

Can be supplied geared to oil or petrol engines.

Being semi-portable, this compact unit is very convenient where a powerful, movable pumping plant is required.

Full particulars on application.



K4

The same construction as the others; driven by a Vee Belt Drive from Electric Motor.

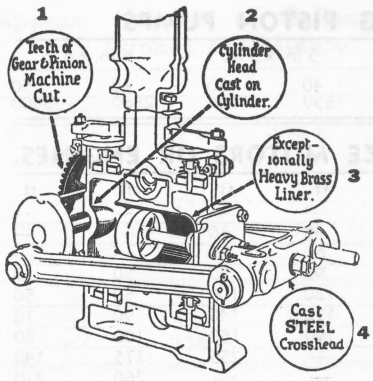
Particulars on request.

4

"AJAX" PISTON PUMPS are noted for LONG SERVICE — Because —

1. Both gear and pinion teeth are machine cut, thus ensuring quiet operation and long life.

2. The cylinder head and cylinder casing are cast in one, giving a remarkably rigid construction, and removing all possibility of leaking or blowing out of packing at this point.

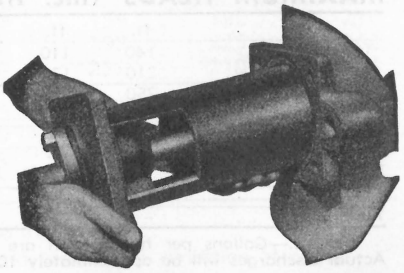


3. The cylinder has a heavy brass liner which is considerably thicker than that of any pump of a similar type. This means much to those who are in the country, as replacing liners is a costly and difficult job, and may even mean sending the pump to the city for repairs. The heavy liner saves your time and money.

4. Crosshead, being made from steel, will withstand heavy knocks or strains that would break the usual cast-iron crossheads.

As shown on right. The Renewable Liner, with Piston, Piston Rod, and Cylinder Head have been withdrawn by HAND, a feature which is practically impossible with other makes of similar pumps.

Note the thickness of Liner. We emphasise that it is absolutely the best value obtainable in this type of pump.

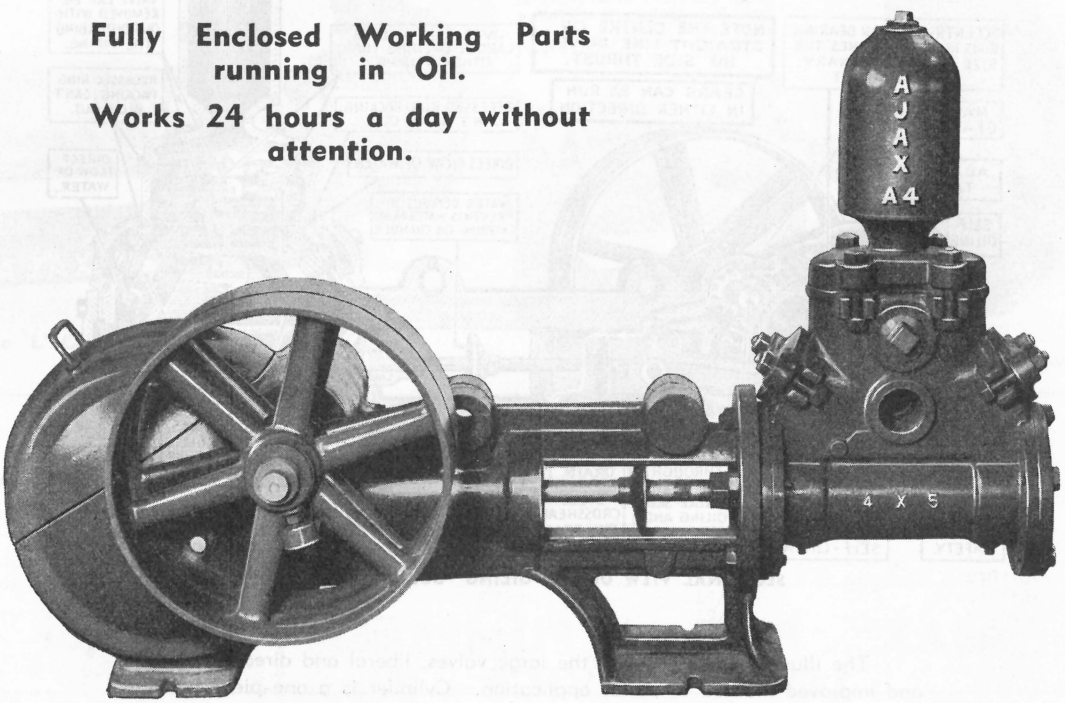


When Ordering Pumps, please give the Information requested on page 1.

K5— "AJAX"
Self-Oiling Bulldozer Pump

Fully Enclosed Working Parts running in Oil.

Works 24 hours a day without attention.



100 lbs. Pressure or 230 ft. Elevation for Engine Drive.
All sizes back geared 5 to 1

This is one of the strongest and best finished pumps we have ever offered. It is specially suitable for forcing water long distances and moderate heights — up to 230 ft. The pump must not be more than 22 ft. above the water level, but it is capable of drawing water horizontally a distance up to 500 ft. Its unique design and solid construction will at once appeal to the practical man on the land.

The Self-oiling Bulldozer removes two of the commonest troubles of the ordinary power pump — lack of lubrication and accidental damage to the unprotected gears. This "Bulldozer," as will be seen from the sectional view above, has an oil reservoir in the base from which oil is effectively distributed to all working parts. This system gives quiet operation and long life with practically no attention.

The gears and all working parts are completely enclosed, but still easily got at if required; thus the bearings are renewable without disturbing any other part; the valves can be inspected without disturbing pipe connections.

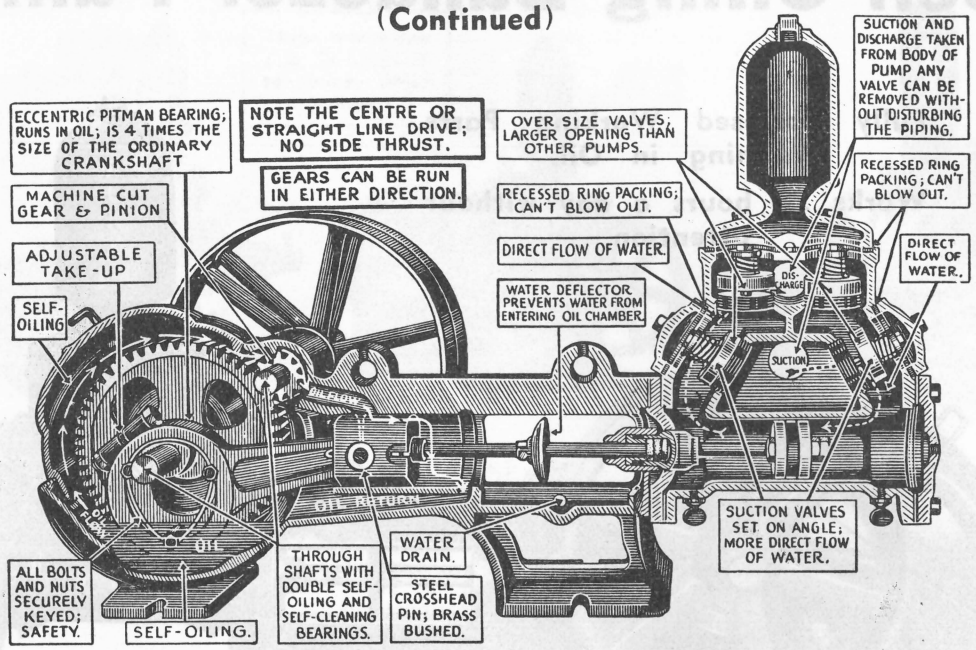
Prices and further particulars — see Page 6.

When Ordering Pumps, please give the Information requested on page 1.

K6— "AJAX"

Self-Oiling Bulldozer Pump

(Continued)


ECCENTRIC PITMAN BEARING; RUNS IN OIL; IS 4 TIMES THE SIZE OF THE ORDINARY CRANKSHAFT
NOTE THE CENTRE OR STRAIGHT LINE DRIVE; NO SIDE THRUST.
GEARS CAN BE RUN IN EITHER DIRECTION.
MACHINE CUT GEAR & PINION
ADJUSTABLE TAKE-UP
SELF-OILING
OVER SIZE VALVES; LARGER OPENING THAN OTHER PUMPS.
RECESSED RING PACKING; CAN'T BLOW OUT.
DIRECT FLOW OF WATER.
WATER DEFLECTOR PREVENTS WATER FROM ENTERING OIL CHAMBER.
SUCTION AND DISCHARGE TAKEN FROM BODY OF PUMP ANY VALVE CAN BE REMOVED WITHOUT DISTURBING THE PIPING.
RECESSED RING PACKING; CAN'T BLOW OUT.
DIRECT FLOW OF WATER.
DISCHARGE
SUCTION
OIL FLOW
OIL RETURN
OIL
SUCTION VALVES SET ON ANGLE; MORE DIRECT FLOW OF WATER.
ALL BOLTS AND NUTS SECURELY KEYED; SAFETY.
SELF-OILING.
THROUGH SHAFTS WITH DOUBLE SELF-OILING AND SELF-CLEANING BEARINGS.
WATER DRAIN.
STEEL CROSSHEAD PIN; BRASS BUSHED.

SECTIONAL VIEW OF SELF-OILING "BULLDOZER" PUMP

The illustration also shows the large valves, liberal and direct waterways and improved method of power application. Cylinder is a one-piece casting, brass-lined. Suction and discharge can be taken from either side. Vacuum chamber (in addition to air chamber) and position of suction valves ensure constant priming under any conditions.

Series No.	Piston Diameter	Stroke	Pipe Connections	Max Speed R.P.M.	Gallons per hour	Fast and loose pulleys	Price
A2	2½ in.	—	1¼ in.	350	—	12 x 2 in.	£25/-/-
A3	3 in.	4 in.	1½ in.	350	850	14 x 2½ in.	£35/10/-
A4	4 in.	5 in.	2 in.	325	1750	16 x 4 in.	£48/-/-
A5	5 in.	5 in.	2½ in.	300	2550	16 x 4 in.	£62/-/-
A6	6 in.	6 in.	3 in.	260	3800	24 x 4 in.	£94/-/-

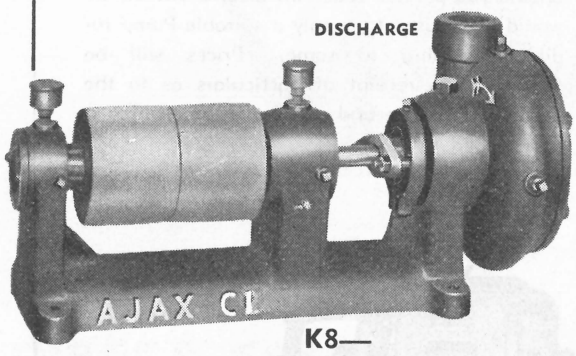
EACH PUMP TESTED UNDER 125 POUNDS PRESSURE.

Feet Elevation or Head	25	50	75	100	150	200
H.P. Required, 2½ x 3 in. Cyl. (70 R.P.M.)						
H.P. Required, 3 x 4 in. Cyl. (70 R.P.M.)	½	¾	1	1¼	1½	2
H.P. Required, 4 x 5 in. Cyl. (65 R.P.M.)	1	1½	1¾	2¼	3	4
H.P. Required, 5 x 5 in. Cyl. (60 R.P.M.)	1	1½	2½	3	4½	6
H.P. Required, 6 x 6 in. Cyl. (52 R.P.M.)	1½	2½	3½	5	7	8½

When Ordering Pumps, please give the Information requested on page 1.

"AJAX" Ball Bearing Centrifugal Pumps

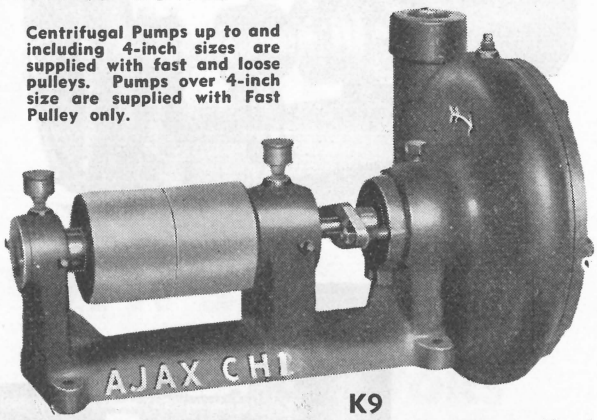
WITH SWIVELLING BOWLS



K8—

Type 'L' Centrifugal Pump for 50 ft. Head

Centrifugal Pumps up to and including 4-inch sizes are supplied with fast and loose pulleys. Pumps over 4-inch size are supplied with Fast Pulley only.



K9

Type 'H' Centrifugal High Duty Pump for 125 ft. Head

Size of Connections		PULLEY DIMENSIONS			Approx.	Type "L" Low Duty 50 ft.		"Type "H" High Duty 125 ft.	
Discharge	Suction	Dia. inches	Face inches	Bore inches	Gals. per hour	Total Head Series No.	Price	Total Head Series No.	Price
¾	1	2½	1½	⅝	800	C ¾	£3/10/–	—	—
1	1¼	3	2	⅝	1,350	C1	£4/2/6	CH1	£6/15/–
1¼	1½	—	—	—	2,000	C1¼	£5/–/–	CH1¼	£8/10/–
1½	2	4	3	¾	3,500	C1½	£5/10/–	CH1½	£10/10/–
2	2½	4	3	1	5,750	C2	£7/–/–	CH2	£12/15/–
2½	3	—	—	—	7,250	C2½	£9/–/–	CH2½	£15/–/–
3	4	5	5	1¼	9,750	C3	£11/10/–	CH3	£17/5/–
4	4	6	5	1¼	16,500	C4	£15/–/–	CH4	£22/10/–
5	5	8	8	1½	25,000	C5	£17/10/–	CH5	£32/–/–

All-gunmetal Pumps stocked.

Smaller suction piping may be used if you so desire but we do not generally recommend it. Special footvalves must be used with centrifugal pumps unless the liquid flows into the pump. It is generally advisable to use all 1 in. piping with ¾ in. pump and 1¼ in. piping with the 1 in. pumps. Up to 1½ in. these pumps have screwed connections, 2 in. and 2½ in. have screwed suction and flanged discharge connections, 3 in. and larger flanged connections. Apply for particulars of larger sizes, or of special pumps for sluicing, fire-fighting, etc. Can be supplied with single bearing without pulleys for direct coupling to motor or engine; or for vee belt drive. Prices on application. We can arrange these with Vacuum Tank for pumping from spear points. Comprehensive installatior details with each pump.

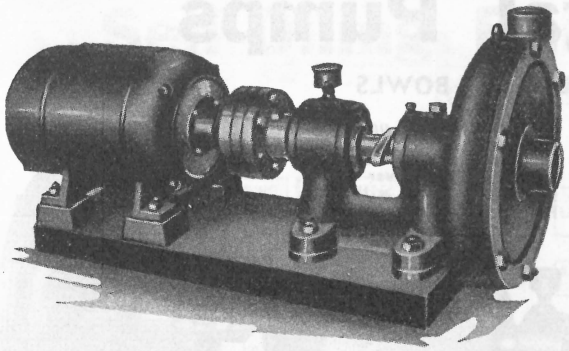
CAPACITY TABLES for TYPE 'L' Centrifugal Pumps.

Head in Feet.	1 in.			1¼ in.			1½ in.			2 in.			3 in.			4 in.		
	G.P.M.	R.P.M.	B.H.P.	G.P.M	R.P.M.	B.H.P.	G.P.M.	R.P.M.	B.H.P.	G.P.M.	R.P.M.	B.H.P.	G.P.M.	R.P.M.	B.H.P.	G.P.M.	R.P.M.	B.H.P.
5	22	1070	.2	32	700	.2	57½	700	.2	95	990	.9	160	1000	1.30	275	900	1.7
10	22	1270	.3	32	1040	.3	57½	1040	.32	95	1100	1.0	160	1110	1.56	275	1010	2.1
15	22	1460	.38	32	1320	.45	57½	1320	.5	95	1230	1.15	160	1230	1.95	275	1110	2.5
20	22	1640	.48	32	1520	.59	57½	1520	.65	95	1355	1.34	160	1345	2.37	275	1210	2.9
25	22	1820	.58	32	1690	.73	57½	1690	.8	95	1470	1.53	160	1460	2.81	275	1300	3.5
30	22	1980	.66	32	1840	.85	57½	1840	.95	95	1580	1.73	160	1570	3.26	275	1390	4.0
35	22	2120	.75	32	1980	.97	57½	1980	1.12	95	1680	1.95	160	1670	3.68	275	1480	4.6
40	22	2260	.86	32	2100	1.13	57½	2100	1.3	95	1775	2.18	160	1760	4.06	275	1555	5.2
45	22	2390	.98	32	2220	1.26	57½	2220	1.45	95	1875	2.46	160	1840	4.46	275	1625	5.9
50	22	2500	1.1	32	2320	1.4	57½	2320	1.65	95	1975	2.75	160	1920	4.86	275	1690	6.5

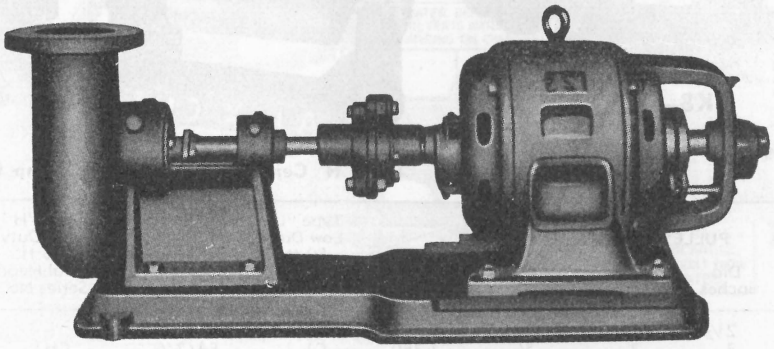
When Ordering Pumps, please give the Information requested on page 1.

K10—

Motor Driven Centrifugal Pumps

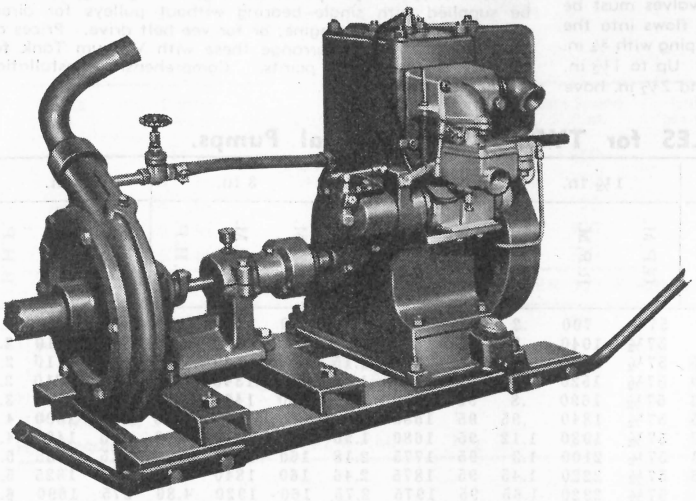


We supply complete outfits in various types. Should you possess your own Electric Motor, we would be pleased to supply a suitable Pump for direct coupling to same. Prices will be forwarded on receipt of particulars as to the horse-power, type and speed of Motor which it is intended to use.



K11—

"AJAX" Centrifugal Pump Direct Coupled to High-Speed Petrol Engine



and all arranged on steel base with handles for manual transport.

We can supply all size pumps and engines for any heads up to 200 ft. if necessary.

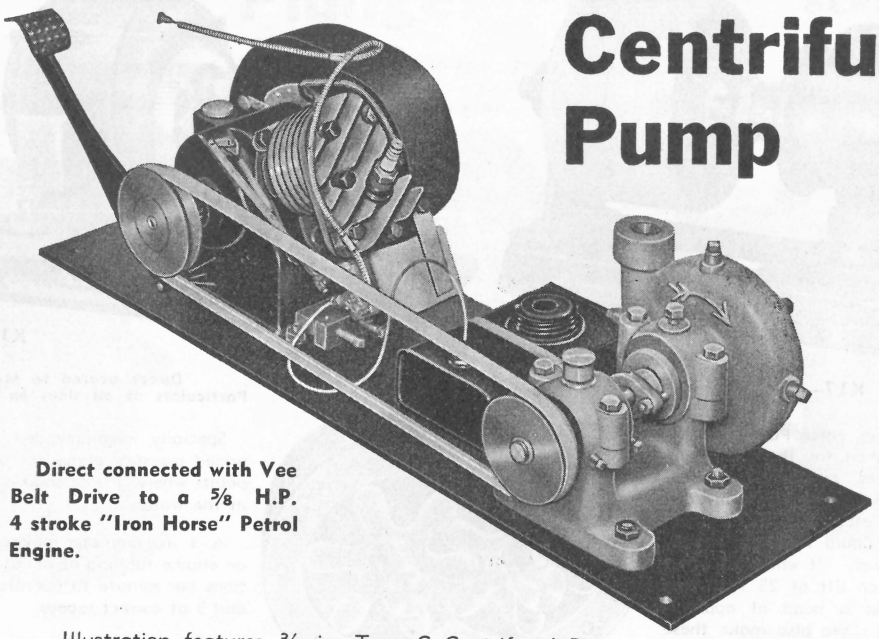
Engines can be arranged for hopper, tank or "pipe from pump" cooling.

Engine or pump can be supplied separately.

Can be supplied with vacuum chamber for automatic starting with footvalve if necessary.

When Ordering Pumps, please give the Information requested on page 1.

"AJAX" No. 1 Ball-Bearing Centrifugal Pump



Direct connected with Vee Belt Drive to a 5/8 H.P. 4 stroke "Iron Horse" Petrol Engine.

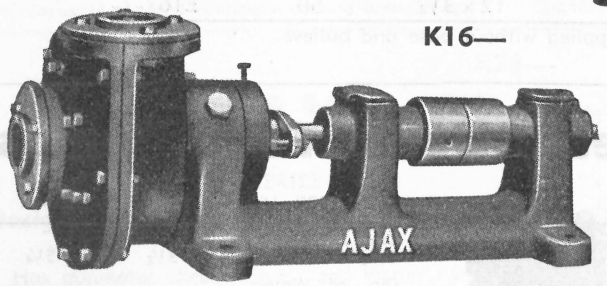
K15—

Illustration features 3/4 in. Type C Centrifugal Pump, capacity of which, when assembled as above, would be approximately 800 galls. per hour against a total head of approximately 30 ft. Larger Pumps with greater capacities can be similarly used against lower heads.

Total weight of combined unit illustrated, approx. 80 lbs. Price on application.

9

"AJAX" New Centrifugal Gravel and Sand Pump



K16—

Diameter of Pump Discharge. in.	Capacity per Hour. Water. Gallons.	Capacity per Hour. Solids. Ratio 1 to 3½ cu. yards.	Diameter of Solid Pump will pass. in.	B.H.P. per 5 feet of Head	Pulleys. Fast and Loose. Diameter Face.	Revolutions per Minute for Heads (including friction). 10 ft.	15 ft.	20 ft.	25 ft.	30 ft.
2	5400	2	1½	0.5	5 x 5	1180	1240	1300	1350	1550
3	9000	5	2	1.0	6 x 5	800	930	1050	1150	1240
4	15000	9	3	2.0	8 x 6	720	800	850	900	950
6	36000	20	4	4.0	10 x 8	650	775	875	950	1025
8	78000	35	6	7.0	14 x 12	385	426	525	600	625

CAN BE SUPPLIED COUPLED TO ENGINE OR MOTOR.

Prices:
2 in., £16; 3 in., £30; 4 in., £40;
6 in., £90.

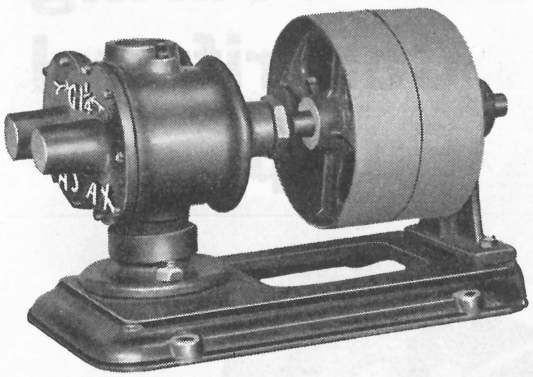
These pumps have substantial cast iron beds, with long ring oiling bearings, fast and loose pulleys (excepting 8 in. size), thrust collar, from 4 in. upwards patent ball-bearing thrust is fitted, swivelling bowl and connections for flanged piping. A renewable liner and door piece are fitted inside, and bowl face plate is easily detachable, so that liner may be easily renewed.

Ported type Impellor is used and the larger sizes can have shoes fittea if required. Gland is tapped for connecting water pressure to lantern bush, so as to keep gland water-sealed and free of all sand, etc.

Hydraulic Jet Elevators or Ejectors for Solids can also be supplied.

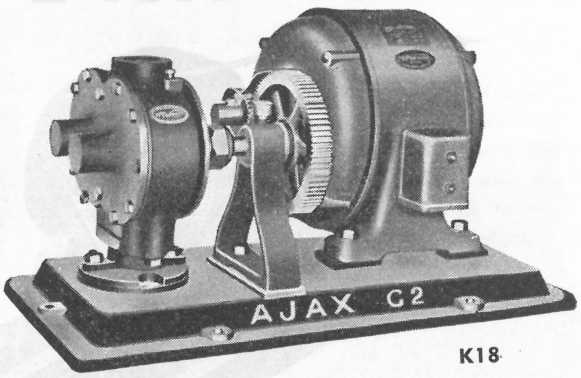
When Ordering Pumps, please give the Information requested on page 1.

"AJAX" Rotary Lift and Force Pumps



K17—

A power Rotary Force Pump, on iron frame; is designed for the use of oil refiners, distillers, creameries, breweries, wine producers, varnish makers, meat-packers, etc. — In fact, wherever grit free liquid must be rapidly elevated by power. It will draw water against a suction lift of 25 feet, and force it against a head of approximately 60 feet. We also make these pumps in gunmetal or brass, for pumping salt water, etc.



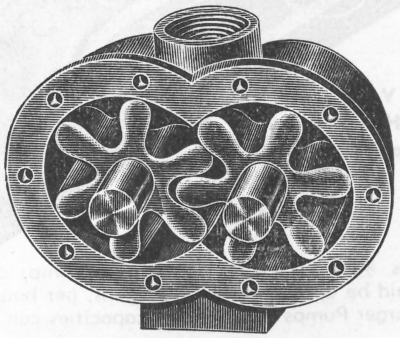
K18

Direct geared to Motor. Particulars of all sizes on application.

Specially recommended as a low-priced pressure pump for use on spear points where grit or sand is not present in the water.

A 3 in. diameter pulley is required on engine running at about 500 revolutions per minute to operate the Nos. 1 and 3 at correct speeds.

No. 1 and No. 3 can be driven by 1 to 2 h.p. Engine.

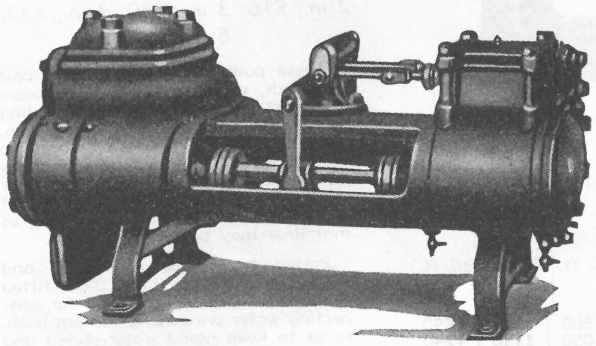


Interior of a Lift and Force Pump.

Series No.	Suction Pipes	Discharge Pipes	Size Pulleys	Discharge at 150 rev. per min. gallons	Prices
G1 ¼	1 ¼	1 ¼	8 x 2 ½	20	£7/-/-
G1 ½	1 ½	1 ½	8 x 2 ½	30	£9/-/-
G2	2	2	12 x 3 ½	50	£16/-/-

May be supplied without base and pulleys.

K19—"AJAX" Steam Boiler Feed Pumps



For marine service or other special requirements, pumps can be supplied with water ends made entirely of gunmetal if desired. Particulars on application.

FOR 160 lbs. WATER PRESSURE.

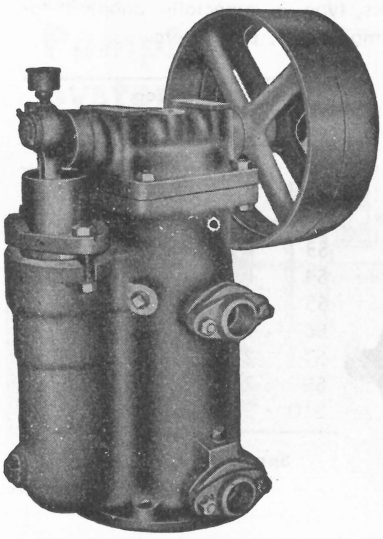
Dia. of Steam Cyl., in.	3	3½	4½	5¼	6
Dia. of Water Cyl., in.	2	2¼	2¾	3½	4
Length of Stroke, in.	3	4	4	5	6
Gallons per hour Floor Space	250	430	650	1,250	1,850
Required in.	24x9	28x9	33x13	38x16	44x17
Steam Pipe, in.	⅜	⅜	½	¾	1
Exhaust Pipe, in.	½	¾	¾	1¼	1¼
Suction Pipe, in.	1¼	1½	2	2½	3
Delivery Pipe, in.	1	1¼	1½	1½	2

Prices on application.

When Ordering Pumps, please give the Information requested on page 1.

"AJAX" Vertical Single-Acting Plunger Pumps SERIES T.

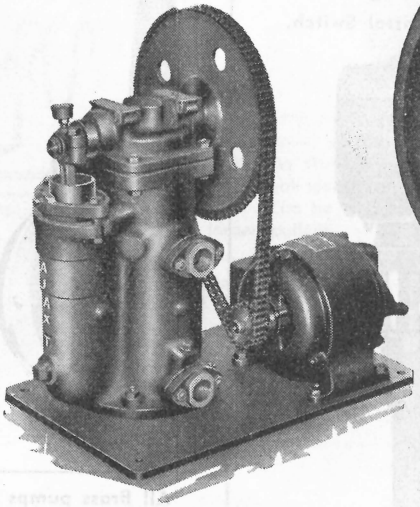
These Pumps can also be supplied fitted to an Engine.



K20—

Uncoupled: Fitted with 10 in. dia. x 1½ in. face, fast and loose pulleys, and Solid Brass Plunger.

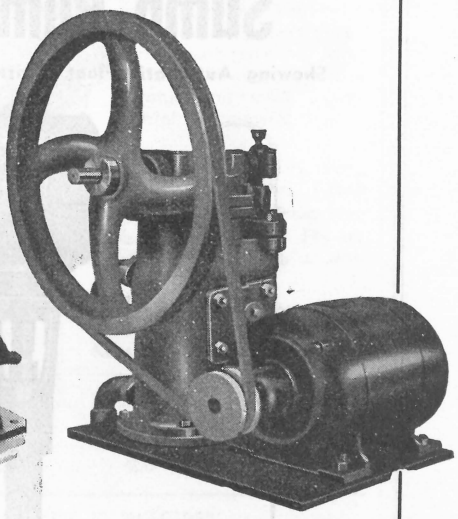
Price, £10/10/-



K21—

Supplied direct coupled to electric motor with chain drive.

Please advise voltage and type of current available.



K22—

Supplied direct coupled to electric motor with Vee belt drive.

Please advise voltage and type of current available.

Prices on application.

This pump has been specially designed for the large variety of services where only a small unit is needed. Fitted for 1 in. suction and delivery pipes. Normal speed approximately 300 r.p.m. and at this speed capacity is 6 gallons per minute. Pump can be operated slower or slightly faster if required—capacity varying accordingly.

Diameter of cylinder 2⅜ in. Length of stroke 1½ in., overall height 19¾ in. All parts easily accessible without disconnecting piping; requires little attention, practically noiseless. Renewable gun-metal ring-oiling bearings. Brass piston valve seats, stems, plates, and springs. An Air Chamber should be used in the discharge pipe line.

K23—

"AJAX" Plunger Pump

SERIES M.

Designed for economical handling of skim milk and other liquids.

Has gunmetal check valves, and Piston fitted with leather buckets. Brass cylinder.

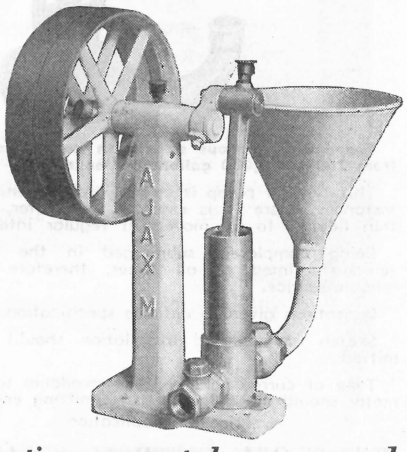
Free from all non-essentials, thus making it easy to keep clean.

Simple construction ensures trouble-free operation, while the capacity is satisfactory for all ordinary requirements.

At 100 r.p.m. capacity is 5 gallons per minute.
At 80 r.p.m. capacity is 4¼ gallons per minute.
At 60 r.p.m. capacity is 3¼ gallons per minute.
Size of piping: One inch, suction and discharge.
Overall height: 22 inches.

With fast and loose pulleys: 12 inches x 2 inches. Price, £7/12/6.

With fast pulley only. Price, £7/5/-.



When Ordering Pumps, please give the Information requested on page 1.

K25—"AJAX" Electric Centrifugal Sump Pump

Showing Automatic Float Control Switch.

Supplied in various sizes with capacities ranging from 200 to 10,000 gallons per hour.

This type of pump is strongly recommended in all instances where it is essential for water, or other thin liquids, to be moved at regular intervals.

Being completely submerged in the liquid it remains primed at all times, therefore ensuring reliable service.

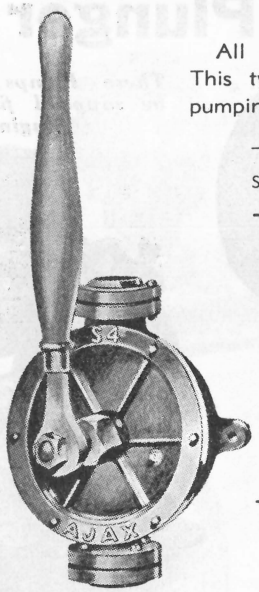
Quotations given to definite specification.

Sketch of proposed installation should be submitted.

Type of current and voltage available to operate motor should be stated when submitting enquiries.

Prices on application.

K26—"AJAX" Semi-Rotary Pumps



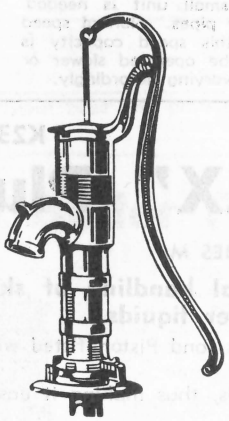
All inner working parts of brass. This type is especially adapted for pumping oils, petrol, etc.

Series No.	Pipe	Cap. per Min. Gall.	Prices
S0	½	4	25/–
S1	¾	6	27/6
S2	1	8½	32/6
S3	1¼	11	40/–
S4	1¼	14	50/–
S5	1½	20	57/6
S6	1½	24	67/6
S7	2	30½	90/–
S9	2½	53½	£10
S10	3	61	£15

Spare Parts Stocked.

All Brass pumps for salt water, etc., also stocked.

K27— "AJAX" House Lift Pump



For Suction Lift, 25 Feet.

This pump is neat in design and light in weight, but strong and serviceable. No. 6 size can also be supplied with plunger rod for operating cylinder pumps down in your well. The spout can be turned in any desired direction. This pump is fitted regularly with an iron hub-base threaded for iron pipe

SPARE PARTS STOCKED.

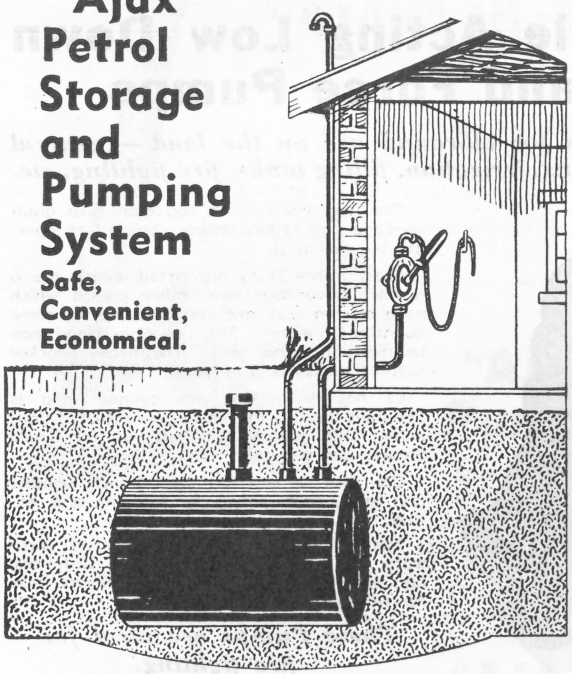
Series No.	Galls. per Hour	Diameter Cylinder, inches	Suction Pipe	Prices
H2	200	2½	1¼	28/6
H3	260	2¾	1¼	34/6
H4	309	3	1½	39/–
H5	390	3¼	1½	55/–
H6	452	3½	2	60/–

When Ordering Pumps, please give the Information requested on page 1.

K28—

"Ajax" Petrol Storage and Pumping System

Safe, Convenient, Economical.



The only safe way to store petrol.

With our system the spirit is kept cool underground, which minimises evaporation, and the risk of fire or theft is reduced to the absolute minimum.

A 10-gauge mild steel electrically-welded tank, leather-packed Lock cap, air vent, pump, 10 ft. length of special petrol hose, nozzle, and all required fittings are included in the price. This outfit enables you to buy petrol in bulk at a big saving.

Capacity	100 gals.	200 gals.	300 gals.
Price	£12/10/-	£15/-/-	£17/10/-

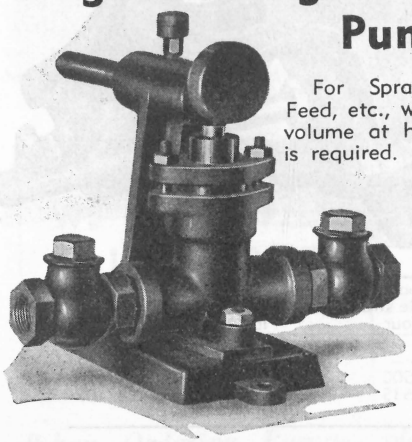
4-gallon visible measure with fittings, £5/-/-.

Complete installation instructions with each outfit.

Approved by Explosives Department and Fire Underwriters' Association.

K29—

Single Acting Plunger Pump



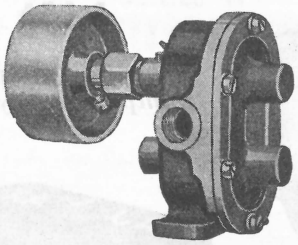
For Spraying, Boiler Feed, etc., where a small volume at high pressure is required.

Price, £4/10/-.

Full particulars on application.

K30—

"AJAX" Gear Pumps



Large numbers of these pumps are in use on gasoline engines for circulating water and oil, pumping skim milk, also for bilge and general yacht pumping, tank supply, oil-burning apparatus and most industrial and general uses.

With the exception of the pulley, these pumps are made from special gun-metal. Specially cut gear wheels. Fitted with long stuffing box, which gives good bearing and prevents leakage. The pulley is 2½ in. diameter for 1½ in. belt. Can be supplied with fast and loose pulleys, or with larger pulleys.

Series No.	Size	Approx. Gals. Revs. p.m.	per Hour	Price
G⅜	⅜ in.	250	60	50/–
G½	½ in.	400	200	57/6
G¾	¾ in.	400	250	65/–

Larger sizes on application.

We would be pleased to submit quotations for "Ajax" Gear Pumps coupled to motors, upon receipt of details of your requirements.

If possible include a rough plan. Also state the voltage of the current available to operate motor, and whether it is A.C. or D.C.

Some of these pumps are now supplied with steel spindles; please say whether gun-metal spindle is required.

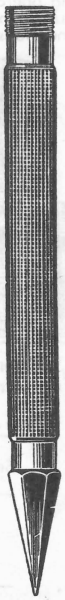
All iron pumps with stainless steel spindles can also be supplied.

K31—

Spear Point

for driving down into sand.

This Driving Point is made of galvanised wrought iron tube, and drilled. It is then covered with brass gauze, and jacketed with perforated brass. The octagonal point, which is of solid cast iron, is securely riveted to body, and is sufficiently wide in the shoulder to ensure ample clearance for pipe following.



Sizes:—	Price.	Code Words.
1¼ in.	21/-	YUJTA
1½ in.	31/-	JUJUZ
2 in.	41/-	YUJVE

When Ordering Pumps, please give the Information requested on page 1.

K32—

"AJAX" Type L Double Acting Low Down Lift and Force Pumps

May be used with Pump Jacks

Splendid Pumps for all-round use on the land — general pumping, spraying, irrigation, filling tanks, fire fighting, etc.

No. L3

The long handle and cog gear give great leverage and reduce power required to operate by one-third.

Brass Valve Seats are fitted, which are a distinct advantage over other pumps which have an iron seat, and cannot pump the same quantity of water. The Cog Gear Head may be used on either end. The heavy bracket support makes a firm base.

L3 has 3 x 4½ inch cylinder and is designed for 1¼ inch pipe connections. Capacity, 500 gallons per hour at 80 Single Strokes per minute.

Can also be supplied with 2 inch cylinder and heavy brass valves for spraying and jetting.

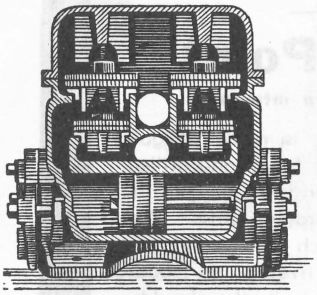
The only hand pumps which will force water to great heights or long distances, and may be used with ¾ inch delivery hose for watering gardens, lawns, etc.

These Pumps are ideal for fire fighting.

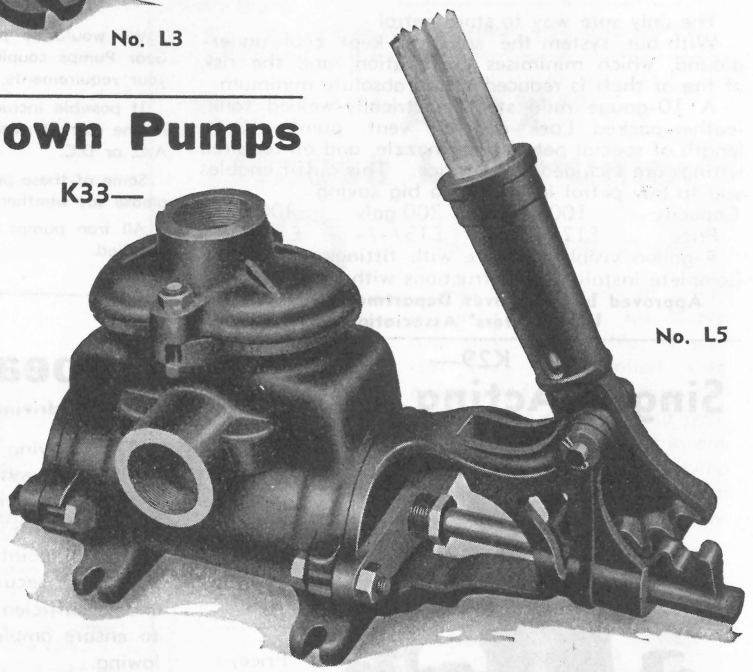
"AJAX" Low Down Pumps for 2 in. Pipe

K33—

L5 will give an output of approximately 1,700 gallons per hour when being operated at 90 Single Strokes per minute, and is fitted for 2 inch pipe connections. Cylinder is 5 x 5 inches.



Section showing Valve Construction of these Pumps.



No. L5

Series No.	Pipe Connections	Piston dia. and stroke	Capacity 80 single strokes hour	Max. Pressure lb.	Price
L1½	1¼	1½ x 4½	—	200	£6/15/-
L2	1¼	2 x 4½	—	150	£6/15/-
L3	1¼	3 x 4½	500	100	£4/5/-
L5	2	5 x 5	1635	x15	£4/10/-

x Depends on the operator.

When Ordering Pumps, please give the Information requested on page 1.

K34

K34—

"AJAX" High Capacity Hand Pump

SERIES H

The outstanding advantage is very high capacity and ease of operation.

Although designed primarily for pumping petrol and oils, it is also effective under certain conditions for other liquids.

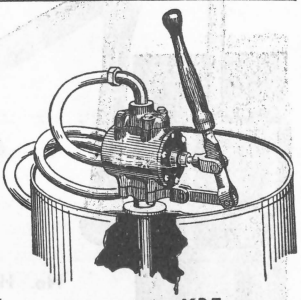
Series No. H½ — ½ in. Pump, capacity 1 gallon every 17 strokes.
Price 35/–

Series No. H¾ — ¾ in. Pump, capacity 1 gallon every 13 strokes.
Price 42/6

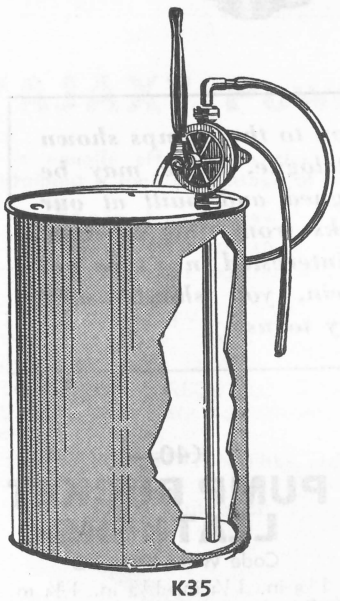
K35—

"AJAX" Drum Pumping Outfit

Specially constructed for pumping Petrol, Oils, Kerosene, etc. Drums not supplied.


K35—

Each size complete with 3 ft. iron suction pipe, fireproof bung attachment, pump, bend, hose connection, 10ft. length hose.
H½ — Pump and ½ in. fittings, 57/6. H¾ — Pump and ¾ in. fittings, 67/6.


K35

K36—

"AJAX" 40-Gallon Drum Oil and Petrol Pumping Outfit

Excellent for use in the field, etc., for pumping oil and spirits into tractors.

Each size complete with 3ft. Suction Pipe, Tapered Iron Bung, Semi-Rotary Pump, Bend, 10ft length of Hose.
Drums are not supplied with outfit unless expressly ordered.

No. 0 — ½ in. Fittings, 47/6
No. 1 — ¾ in. ,, 55/–
No. 2 — 1 in. ,, 65/–
No. 3 — 1¼ in. ,,

WE CAN SUPPLY A LOW-PRICED PETROL-RESISTING HOSE.

K37—

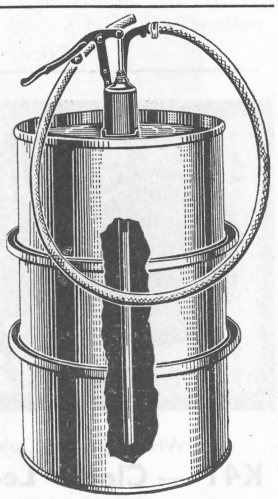
"UTILITY" Drum Pumping Outfit

For Petrol, Kerosene, Diesel Oil Tractor Fuel and other liquids.

Safe, reliable and inexpensive. Adaptable to all Oil Companies' standard 45, 25, 12 gall. Bulk Drums. Specification: Cast-iron Cylinder, Cast-iron Piston and Piston Ring, no leather buckets to wear, Down Pipe, 6 feet Hose and Nozzle. Capacity, 6 galls. per minute. Easy Pumping.

Price, 36/- each.

Lubricating Oil Pump only; 32/6 each.


K36

When Ordering Pumps, please give the Information requested on page 1.

K38—

"AJAX" Caravan Pump

SERIES H.

For a Water Supply in your Caravan.

No. H12

Pumps water into an overhead tank to give running water in the caravan — or pumps direct to sink or wash basin.

Gunmetal throughout — no unpleasant rusty water. Nickel-plated finish; mounted on wood base.

Suits 5/8 inch copper or brass tube, 1/2 inch iron pipe or hose.

No priming needed. Can be supplied with handle on either left or right hand.

Can also be used as a pressure pump for feeding boilers, etc.

Price, 42/6.

K39—

"AJAX" H 13 Hand Pump DOUBLE ACTING

Will lift 27 feet. Will force 80 feet. Fitted with renewable leather plunger.

Can be primed when necessary.

Diameter Cylinder	Suction Pipe	Discharge Pipe
2in.	1in.	3/4in.

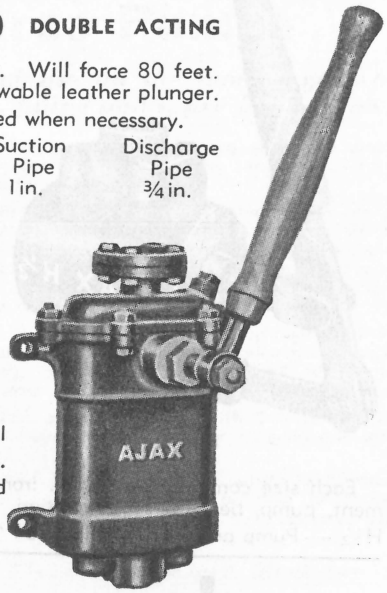
CAPACITY

Full Strokes per minute 100

Gallons delivered 7 gallons.

Will Pump all Kinds of Liquids. Works easily and silently.

Prices on application.



In addition to the Pumps shown in this Catalogue, there may be others designed and built at our Pump Works from time to time. If you are interested in a type not shown herein, you should send your inquiry to us.

K40—

PUMP BUCKET LEATHERS

Code Word "YUJYO"

1 1/8 in. 5d.	1 1/4 in.-1 1/2 in. 6d.		1 3/4 in. 8d.
2 in. 9d.	2 1/4 in. 10d.	2 1/2 in. 11d.	2 3/4 in. 1/-
3 in. 1/1	3 1/4 in. 1/2	3 1/2 in. 1/3	3 3/4 in. 1/5
4 in. 1/7	4 1/4 in. 1/10	4 1/2 in. 2/1	4 3/4 in. 2/4
5 in. 2/8	5 1/2 in. 3/2		6 in. 3/8 ea.

When ordering please advise diameter of cylinder, as the old leathers may be worn down.

K41 — Clack Leathers for "Douglas" Type Pump and Footvalves

Code Words: "YUKAN."

Dia. 2 3/4 in.—5d. 3 in.—6d. 3 1/4 in.—7d. 3 1/2 in.—9d. 3 3/4 in.—10d. 4 1/4 in.—1/- each.

When Ordering Pumps, please give the Information requested on page 1.

K42—

"AJAX" Diaphragm Bilge Pumps

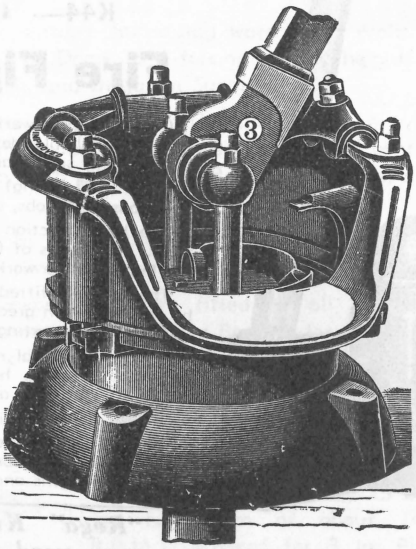
Will lift water vertically 25 ft.

For Ships, Barges, Scows and other vessels; also for filling tanks for Railroad and Street Sprinklers, or wherever a stationary pump of large capacity by hand power is required.

The efficiency and durability of a Diaphragm Pump depends entirely upon the perfection of the diaphragm.

Used extensively by contractors, tanners, etc., or wherever liquids containing debris, solids, etc., are to be pumped.

Large fullway valves allow passing of all matter. Operated by long handle.



No. D2 BILGE PUMP

BOTTOM INLET. FOR IRON PIPE.

Operated by one man.

Approximate capacity, 1,800 gallons per hour.

Suitable for 2½in. iron pipe.

Price, £8/10/-.

No. D3 BILGE PUMP

Operated by one man.

Approximate Capacity, 3,500 gallons per hour

Suitable for 3in. iron pipe.

Extra Diaphragms for both sizes always carried in stock.

Price, £10/-/-.

K43—

"AJAX" Power Driven Diaphragm Pumps

17

It is equally effective in clear water and in water containing a high percentage of mud, sand and solids.

Main Features:

POSITIVELY SELF PRIMING. No foot valve or strainer required on end of suction pipe.

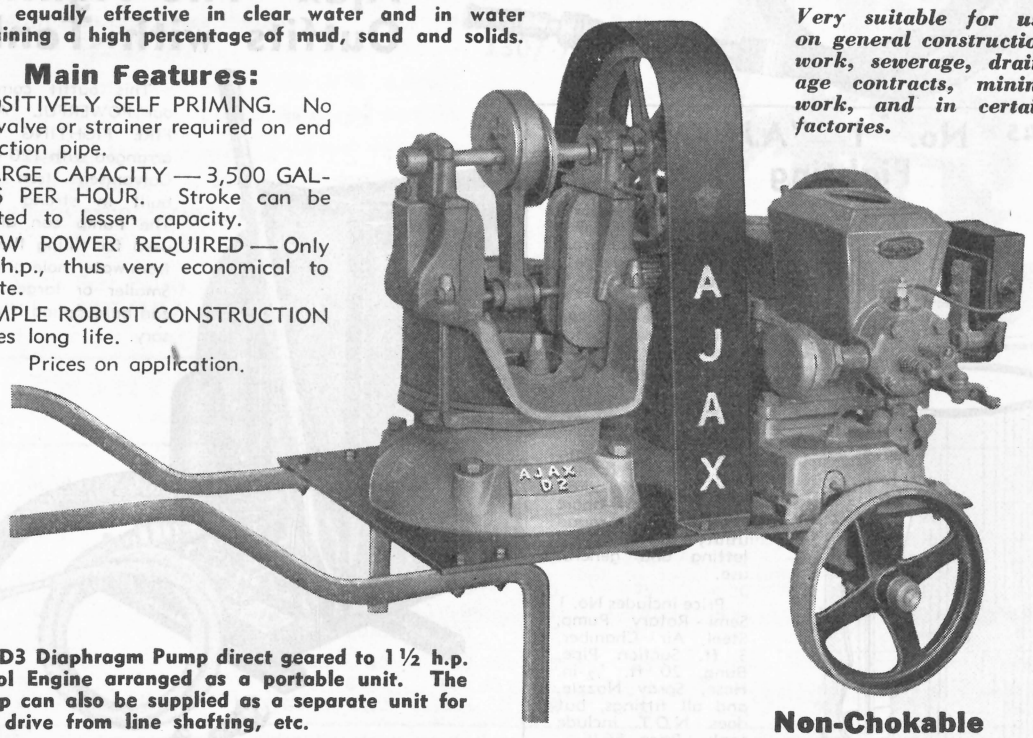
LARGE CAPACITY — 3,500 GALLONS PER HOUR. Stroke can be adjusted to lessen capacity.

LOW POWER REQUIRED — Only 1½ h.p., thus very economical to operate.

SIMPLE ROBUST CONSTRUCTION ensures long life.

Prices on application.

Very suitable for use on general construction work, sewerage, drainage contracts, mining work, and in certain factories.



No. D3 Diaphragm Pump direct geared to 1½ h.p. Petrol Engine arranged as a portable unit. The Pump can also be supplied as a separate unit for belt drive from line shafting, etc.

Non-Chokable

When Ordering Pumps, please give the Information requested on page 1.

Fire Fighting, Jetting and Spraying

K44— "AJAX" Fire Fighting Pump

One of these powerful Double-acting No. L1 "Ajax" Pumps will be a reliable defence against fires. Even in a small blaze it may save many times its cost.

After (and during) the danger season, it may be used for numerous other jobs, such as ordinary pumping, spraying, etc.

The heavy suction hose goes into a tank mounted on a truck. By means of the long handle and the cog gear head, the Pump can be worked with surprising ease.

The specially fitted steel air chamber causes the water to be delivered with great pressure, and continuously; big factors in the efficient extinguishing of fires.

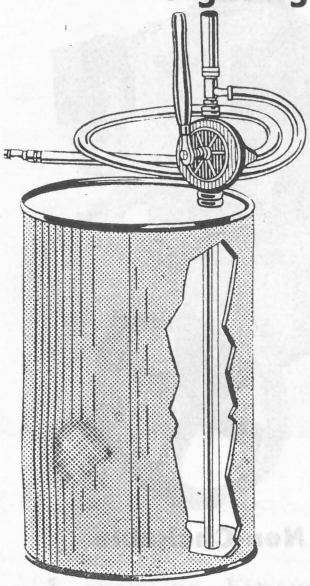
Special nozzle fitted to hose enables the operator to have a powerful jet, a heavy soaking spray, or a gentle mist at will.

1 in. suction, £5/8/-; 1¼ in. suction, £5/9/3.

Complete with all fittings as illustrated. Hoses extra, recommend ¾ in. delivery hose, please state lengths and sizes required.

"Rega" Knapsack Spray Pumps are used as fire-fighters with great success.

K45— No. 1 "AJAX" Fire Fighting Outfit.

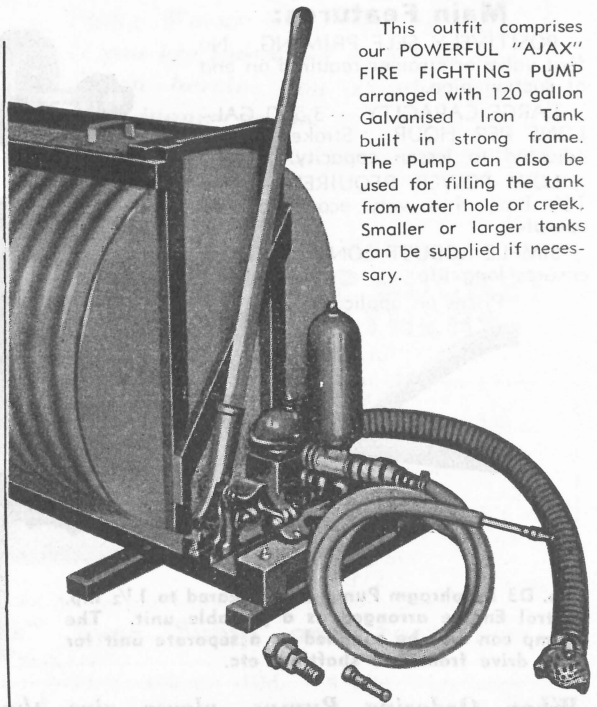


A little water sprayed at high pressure kills more fire than a dozen men with beaters.

The above is proved beyond question, year after year. And it takes very little water. This compact and easily portable outfit, made up from a petrol or oil drum, will turn two men into ten; this year it may save you a hundred times its cost—apart from its all-round utility for spraying, jetting and general use.

Price includes No. 1 Semi-Rotary Pump, Steel Air Chamber, 3 ft. Suction Pipe, Bung, 20 ft. ½-in. Hose, Spray Nozzle, and all fittings, but does NOT include tank. Price, 56/6.

K46— "Ajax" Fire Fighting Outfits with Tank



This outfit comprises our POWERFUL "AJAX" FIRE FIGHTING PUMP arranged with 120 gallon Galvanised Iron Tank built in strong frame. The Pump can also be used for filling the tank from water hole or creek. Smaller or larger tanks can be supplied if necessary.

When Ordering Pumps, please give the Information requested on page 1.

K47—

"AJAX" PUMPING JACKS

"Ajax" Pumping Gears are suitable for raising water from Wells or Bores of any depth, from Rivers or Dams, and forcing to any height or distance, for House, Garden, Stock, and Irrigation Supplies.

They are built especially for heavy work. The construction ensures great lifting power, strength, and capacity. It gives a direct and central lift of the pump rod, doing away with all lateral and twisting strains, and thus reducing wear.

The gearing is supported by a substantial Stand Pipe with Base Casting suitable for mounting on timber or concrete foundations.

Large size Screw Down Grease Cups are fitted on all bearings, providing efficient means of lubrication. An Outer Bearing for the Main Axle is also included, to carry the Pulleys, and take the pull of the belt.

No. J1

Geared 3½ to 1, strokes 7 and 9 in., fast pulley 23 x 3 (to be driven at about 110 R.P.M.), screwed for 2½ in. Pipe (bushings extra). Loose Pulley extra.

PRICES:
With Fast Pulley only,
£18/-/-

With Fast and Loose Pulleys,
£20/10/-

No. J2

Geared 5 to 1, strokes 7, 9, 11, and 13 inches, fast pulley 23 x 3 (to be driven at about 140 R.P.M.), screwed for 3 in. Pipe (bushings extra). Loose pulley extra.

PRICES:
With Fast Pulley only,
£27/10/-

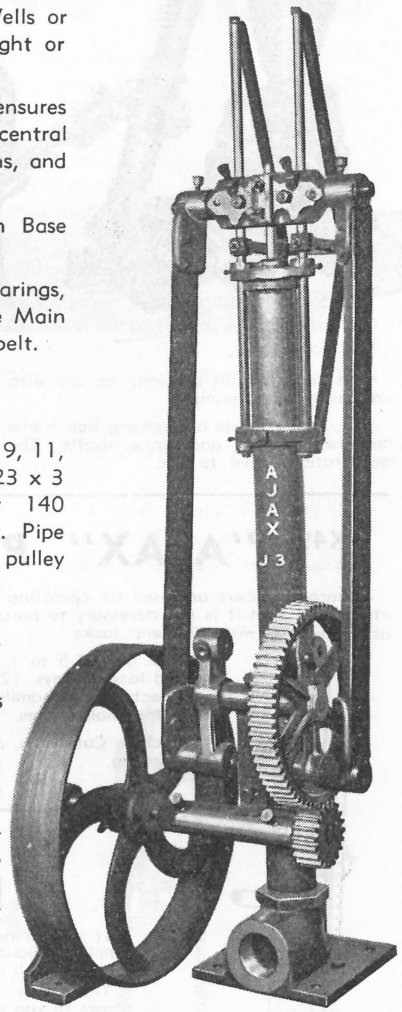
With Fast and Loose Pulleys
£30/-/-

No. J3

Geared 4½ to 1, strokes 10, 12, 14, and 16 ins. fast pulley, 24 x 4 (to be driven at about 130 R.P.M.), screwed for 3 in. Pipe (bushings extra). Loose pulley extra.

PRICES:
With Fast Pulley only
£36/10/-

With Fast and Loose Pulleys,
£38/10/-



K47

19

Capacity Table for "AJAX" Pumping Gears.

GEAR	LENGTH STROKE		TOTAL HEAD IN FEET 50 ft.	75 ft.	100 ft.	150 ft.	200 ft.	250 ft.	300 ft.	350 ft.
Standard Gear No. J1	7 in. & 9 in.	S.P.M.	30	30	25	25	20	20	20	—
		CYL.	4 in.	3¾ in.	3½ in.	3 in.	2½ in.	2¼ in.	2 in.	—
		G.P.H.	624	550	398	292	162	130	104	—
No. J2	11 in. & 13 in.	S.P.M.	30	30	25	25	20	20	15	15
		CYL.	6 in.	5½ in.	5 in.	4½ in.	4 in.	3¾ in.	3½ in.	3 in.
		G.P.H.	2026	1703	1172	950	600	530	345	253
No. J3	10 in. 12 in. 14 in. & 16 in.	S.P.M.	30	30	25	25	20	20	20	20
		CYL.	8 in.	7 in.	6 in.	5½ in.	5 in.	4½ in.	4 in.	3½ in.
		G.P.H.	4432	3394	2078	1746	1154	935	739	566

S.P.M. = Strokes per minute. Capacities given are displace. Cyl. = Cylinder Pump. G.P.H. = Gallons per hour.

When Ordering Pumps, please give the Information requested on page 1.

K48—

"AJAX" J8 PUMP JACK

Illustration shows our J8 Pump Jack coupled to an Ajax Hand Pump.

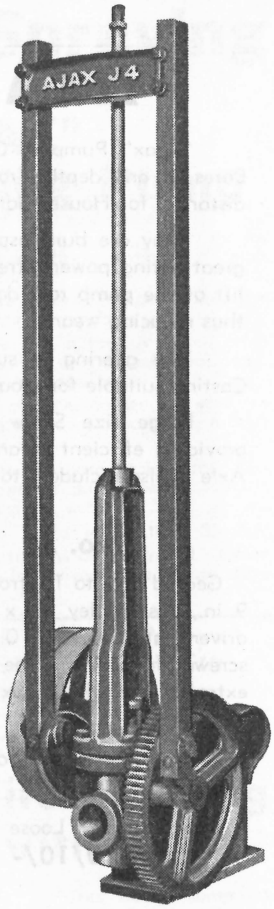
This Jack is built specially for use with various types of pumps.

The Jack consists of a strong box frame carrying the gear and pinion shafts. The gear ratio is five to one.

Furnished regularly with 8 inch by 2½ inch fast and loose pulleys.

Price, £4/18/6 (Jack only).

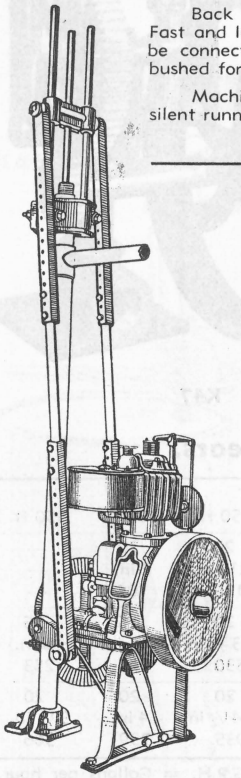
Attachment for Low-down Pump, 7/6 extra.



K49—

K49— "AJAX" PUMPING HEAD

Large numbers are used for operating Cylinder Pumps down in wells, mining shafts, etc. Note that it is not necessary to purchase a separate Guide Rod and Stuffing Box, as is the case with all Pump Jacks.



Back geared 5 to 1. Length of strokes, 4½ in., 7 in. and 9 in. Fast and loose pulleys, 12 in. x 2 in., running at 150 R.P.M. Can also be connected to windmills. Made for 2 in. piping, and is generally bushed for smaller sizes.

Machine Cut Gears, an exclusive feature, give smoother and more silent running.

Price, £8/10/-.

K50—

THE "AJAX" PUMPER

It seldom needs any attention, excepting in the replenishment of lubrication and petrol supplies. Built for outdoor work, it is unaffected by heat or cold, or any weather conditions. It will run up to 12 hours on a gallon of petrol.

The "Ajax" Pumper is an air-cooled engine, without fans or cooling attachments, and comes to you ready to set up and run.

It clamps direct to any pump standard.

The new model "Ajax" Pumper is fitted with a new design cross head so arranged that it grips any size of pump rod and has adjustable guides for the pitman arms.

Although the "Ajax" Pumper is particularly economical to operate, the new model is fitted with a kerosene vaporiser to enable it to be run on a cheaper grade of fuel if desired.

The Pump stroke has three adjustments, viz., 5 in., 7½ in., and 10 in.

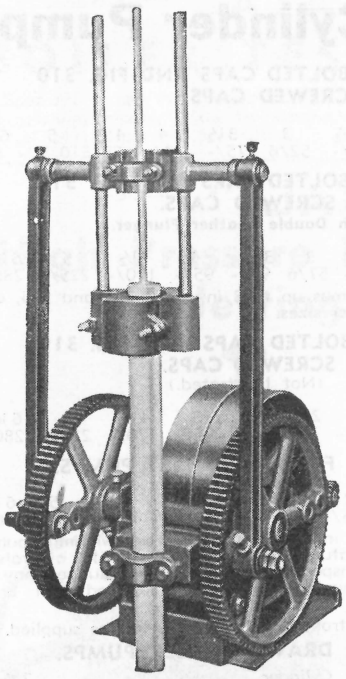
The "Ajax" Pumper will work at any depth where a windmill can be used.

Price, £36/15/-.

Capacities at various heads at 33—10 in. strokes per minute.

When Total Head is not over	Dia. of Pump Cylinder Recommended	Approx. Delivery per hour	When Total Head is not over	Dia. of Pump Cylinder Recommended	Approx. Delivery per hour
ft.	in.	gal.	ft.	in.	gal.
35	6	2,000	200	3	500
50	5	1,400	250	2¾	425
90	4	900	300	2½	350
100	3¾	790	350	2¼	280
125	3½	690	400	2	225
150	3¼	590	500	1¾	170

When Ordering Pumps, please give the Information requested on page 1.



K51

K51— "AJAX" WORKING HEAD

THIS PUMPING HEAD is of latest construction and is very efficient. An outstanding feature is that the frame is of very heavy welded mild steel construction. It cannot break. It is strongly braced and cannot get out of line.

THE POWER is applied to the pump rod through double gear wheels, one either side of the stand; and the 16 in. x 3 in. fast and loose belt pulleys are located in the centre between bearings.

THE PINIONS are of mild steel, machine cut, and the large gears are cast from accurately cut metal patterns.

THE BEARINGS are of ample dimensions and grease lubricated. The machine is arranged for clamping on to the rising pipe as well as to the flooring, and the crosshead runs on guide rods, the casting carrying these being so arranged as to be capable of clamping to any size pipe.

THE CROSSHEAD is made adjustable to suit different size pump rods. May also be supplied with extended pitman arms for "spill pipe" discharge to Tanks.

Strokes:
8 in., 10 in., 12 in. or 14 in.
Back-geared .... 8½ to 1

Fast and Loose Pulleys:
16 in. x 3 in.
Speed: Max., 35 strokes per min.

Price, £18/-/-.

CAPACITIES ON 14 INCH STROKE.

Total Head	Cylinder	Galls. per hr.	Total Head	Cylinder	Galls. per hr.
385	2¼	360	160	3½	874
320	2½	432	125	4	1120
260	2¾	536	95	4½	1450
220	3	630	80	5	1750

K52— "AJAX" Pump Jack

THIS STURDY PUMP JACK is self-oiling and all gears and rocker beam are enclosed in a dust proof casing which serves as the oil reservoir. Perfect lubrication and freedom from unnecessary wear are thus assured.

THE GEAR AND PINION are machine cut. The gear has an eccentric cast integral which operates a walking beam hinged at one end to the main frame or base. The other end moves vertically as the eccentric revolves and is attached to the arms which are of angle steel. As there is no rotary crank pin motion but vertical movement only, there is no side thrust on the pump rod.

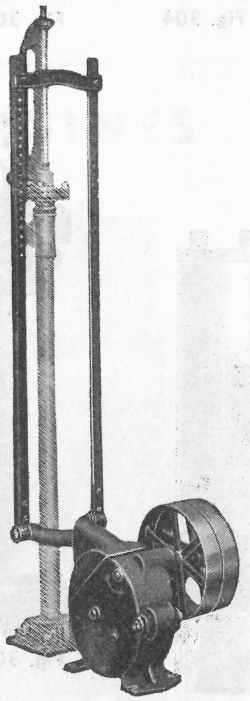
STROKE 8 in. BACK GEARED 6 to 1.

THE PULLEYS are 12 in. x 2½ in. fast and loose.

THE FRAME does not fasten to the rising pipe but is bolted to the floor near the rising pipe.

This pump jack is ideal for motor drives on account of its gear ratio and higher driving speed than an ordinary pump jack.

Price, £8/10/-.



K 52

When Ordering Pumps, please give the Information requested on page 1.

K53—

All Brass Bore or Windmill Cylinder Pumps

With improved valves, heavy brass rod screwed Whitworth thread, and hard drawn brass barrel. Supplied for 12 in. stroke. Please advise the size of pump rod you propose using. ⅜ in. or ½ in. gal. piping is generally satisfactory. Can supply any size, stroke or with Ball Valves.

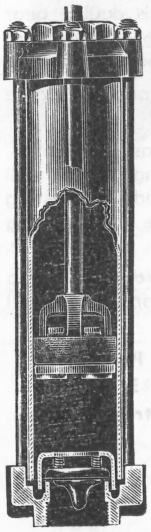


Fig. 304

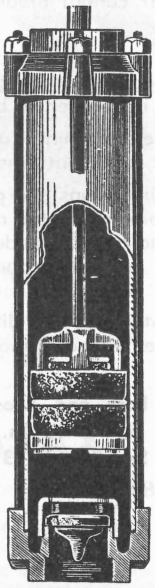


Fig. 305

Fig. 310

Fig. 311

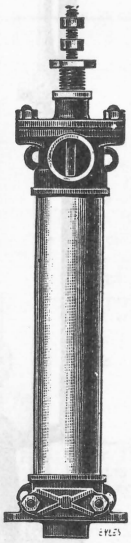


Fig. 301

Fig. 317

FIG. 304 BOLTED CAPS AND FIG. 310 SCREWED CAPS.

Inside Diameter of Cylinder	2½	3	3½	4	4½	5	6 in.
12 in. Stroke ..	44/-	52/6	75/-	84/-	£5	£10/5/-	£12

FIG. 305 BOLTED CAPS AND FIG. 311 SCREWED CAPS.

With Double Leather Plunger.

Inside Dia. of Cylinder ..	2	3	3½	4	4½	5	6 in.
12 in. Stroke	42/-	57/6	90/-	95/-	170/-	225/-	280/-

Two bolts on pumps up to 3 in., Figs. 304 and 305, and three bolts on larger sizes.

FIG. 309 BOLTED CAPS AND FIG. 315 SCREWED CAPS.

(Not Illustrated.)

Inside Diameter of Cylinder	2	2½	2¾	3	4½	5	6 in.
12 in. Stroke ..	70/-	76/-	—	95/-	170/-	225/-	280/-

FIG. 301 FORCE AND LIFT PUMPS.

Inside Dia. of Cylinder	2	2½	3	3½	4	4½	5	6 in.
12in. Stroke	70/-	75/-	100/-	140/-	165/-	195/-	260/-	310/-

These Fig. 301 improved side delivery windmill pumps have desirable features including accessibility of valves, bottom cover for inspection of lower valve, plunger may be withdrawn by removing top cover. Supplied with brass stuffing box.

Any length of stroke and large sizes will be supplied.

FIG. 317 DRAW PLUNGER PUMPS.

Inside Diameter of Cylinder .... 2¾ in.
12 in. Working Stroke 105/-

Fig. 317, Draw Plunger type, are used in very deep bores, wells, etc., and made of galvanised wrought iron piping, inside of which is fitted a solid brass liner.

Each end has male thread, which is screwed to piping and when leathers or valves need renewing the plunger and lower valve may be withdrawn through all the piping without further dismantling pipe lines.

Any of the above can be supplied for different size piping.

K54—

"AJAX" DEEP WELL PUMPER

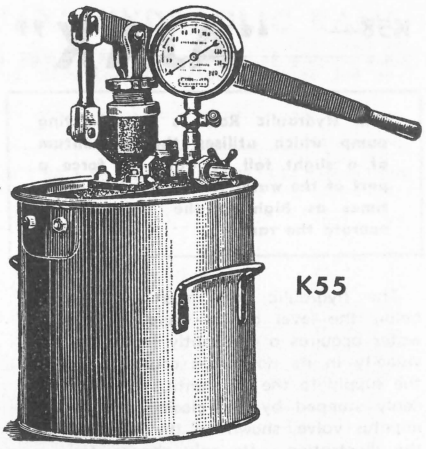
This head has been designed specially for use when the water level is lower than 25 ft. from top of well or bore.

A cylinder pump as above is fitted in or as near the water as possible, and connected to the head by suitable piping. Another pipe, generally ⅜ inch, galvanised, is fitted to piston rod in cylinder pump and also to the pump rod in head, and operates inside the main piping from cylinder to head, thus working the cylinder pump. The bottom connection on head is tapped for 2 inch piping, but larger or smaller piping may be used. Usually a nipple and tee are fitted for pumping water to overhead tanks, etc. We draw your attention to the extended pump rod which may be connected to windmill or pump jack, etc. May be used with delivery hose for spraying, etc. Can be adjusted for 5½ inch, 7 inch, or 9 inch strokes.

When Ordering Pumps, please give the Information requested on page 1.

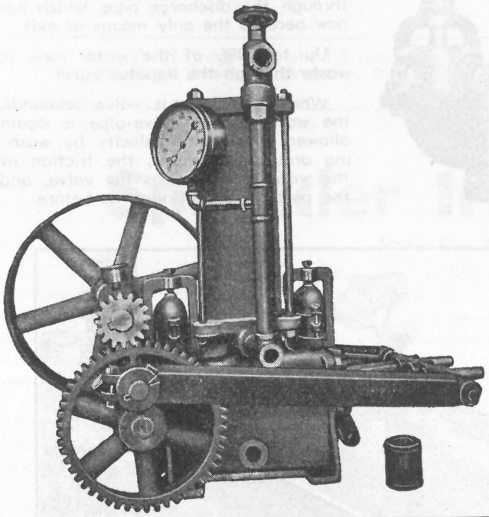
K55— "AJAX" BOILER TEST PUMPS

Specially made for Testing Boilers, Cylinders, etc., and also used for picking meats. Can be supplied without gauge or container. Full particulars on application. Code Word: "YOYGE."



K55

K56— "AJAX" High Pressure Power Spray or Jetting Pump



A Double-action Pump, capable of being coupled to an engine, for spraying or jetting purposes.

Cylinder: Heavy, brass lined, 2-in. diameter, 5-in. stroke.

Capacity: Will pump against pressure up to 300 lb. per sq. in.

Plunger Rod: Delta metal, 5/8-in. diameter.

Piston: Fitted with special moulded rubber and linen buckets.

Valves and Seats: Combined suction and discharge phosphor bronze ball valves with reversible seats.

Air Chamber: Extra large capacity, to give even and steady pressure. Made of 3/16 in. steel tube, with heavy cast-iron ends.

Pipe Connections are arranged to allow valve inspection without disconnecting.

Pitman Arms: Channel steel, straight, with renewable bushes fitted in big ends.

Capacity:	30	40	50 R.P.M.
	200	260	330 Galls. per hour.

Dimensions: Overall length 32½ inches; width, 23½ inches; height, 25½ inches; weight, 170 lbs.

Complete with pressure gauge, relief valve, and strainer, as illustrated. Price, £24/3/-.

K57— "AJAX" VERTICAL ENGINES

Series "W" Vertical Engines are of the slow speed, totally enclosed, self-lubricating, heavy duty type, and may be either tank or hopper cooled.

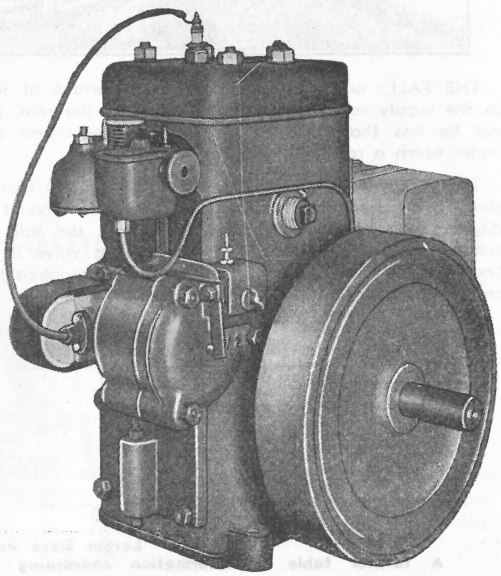
Illustrated is the 2WT engine, which develops 2 h.p. at 1,000 r.p.m. These engines are designed for tank cooling. Simple pipe connections are made with any suitable tank, and adequate water circulation takes place by thermo-syphon.

Hopper cooled engines have specially designed cylinder heads incorporating a "hopper" or self-contained water cooling tank.

These engines are ideally suitable for direct coupling to driven machinery, and can be operated with perfect safety at speeds up to 1,500 r.p.m.

Every moving part, with the exception of the flywheel, is enclosed, and these engines are absolutely dustproof.

The automatic air valve type benzine-kerosene vaporisers give economical and smokeless operation on kerosene fuel. The hot spot induction manifold permits a change from benzine to kerosene operation within a minute or two of starting.



Type	H.P.	R.P.M.	Bore Ins.	Stroke Ins.	Height Ins.	Stdrd. Pulley Ins.	C'shaft Dia. Ins.	Fuel Tank Galls.	Price.
2WT	2	1,000	3	3	20⅛	5D. x 4	1¼	1¼	£44/15/-
2WH	2	1,000	3	3	24⅛	5D. x 4	1¼	1¼	£41/15/-
4WT	4	800	4	4	24⅝	5D. x 4	1¼	1¼	£58/15/-
4WH	4	800	4	4	29¾	5D. x 4	1¼	1¼	£56/15/-
6WT	6	750	4½	5	29⅞	8D. x 6	1½	2¼	£78/10/-
6WH	6	750	4½	5	35 3/16	8D. x 6	1½	2¼	£75/-/-

When Ordering Pumps, please give the Information requested on page 1.

K58— "AJAX" Hydraulic Rams

The Hydraulic Ram is a self-acting pump which utilises the momentum of a slight fall of water to force a part of the water to an elevation many times as high as the fall used to operate the ram.

Continuous Automatic Pumping, Day and Night.

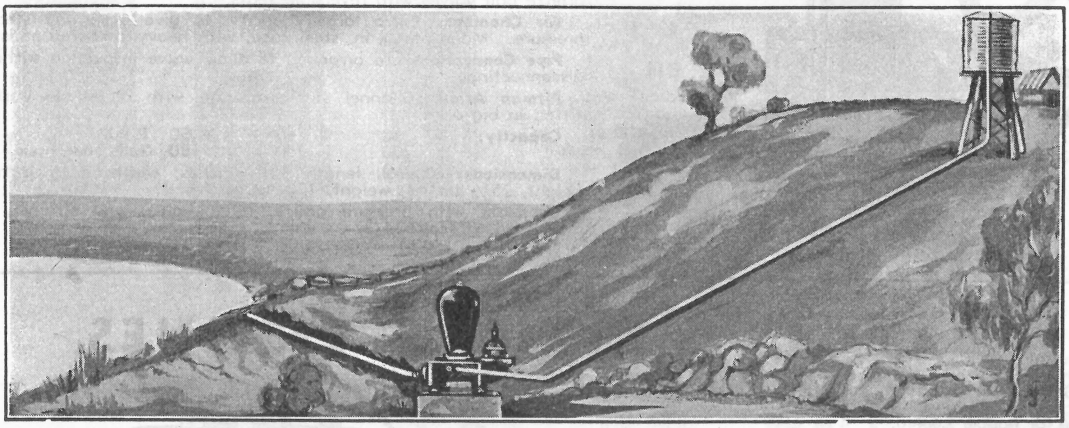
Once started, require practically no further attention.

The hydraulic ram must be set below the level of the supply. The water acquires a constantly increasing velocity in its downward course from the supply to the ram until it is suddenly stopped by the closing of the impetus valve, shown on the right of the illustration. Its only chance for escape is through the inside valve, which opens into the air chamber; the air in this chamber is compressed by the blow sufficiently to allow a portion of the water to enter.

The air immediately expands and recovers again its original volume. This action closes the inside valve and compels the excess of water to escape through the discharge pipe, which has now become the only means of exit.

Up to 90% of the water runs to waste through the impetus valve.

When the impetus valve rebounds, the water in the drive-pipe is again allowed to acquire velocity by washing around the valve, the friction of the water again raises the valve, and the process is continued as before.



THE FALL: or vertical distance from surface of water in the supply reservoir to drive opening in the ram, must not be less than two feet, as this is the lowest head under which a ram will work satisfactorily.

THE DISCHARGE ELEVATION: must not be less than six times nor more than twelve times the fall. Should the discharge elevation be less than six times the fall, this condition may be corrected by installing a valve in the line and throttling it so as to produce the required back pressure by restriction.

QUANTITY DISCHARGED: by the ram will be approximately from 1/12 to 1/24 of the amount supplied to the ram.

THE LENGTH OF THE DRIVE PIPE: must never be less than five times, nor more than ten times the fall. Any convenient length within this range may be used.

Please advise the elevation, length and size of proposed pipe lines, elevation from Ram to highest and lowest water levels at source of supply, volume of water available to operate the ram, and quantity required delivered into tank per 24 hours.

Series No.	Quantity of water furnished by the source of supply in gals. per min.	Diameter of Pipe Drive	Diameter of Pipe Discharge	Price
R2	½ to 2	¾ inch	½ inch	£4/-/-
R3	1½ to 4	1 inch	½ inch	£4/15/-
R4	3 to 7	1¼ inch	½ inch	£5/5/-
R5	6 to 14	2 inch	¾ inch	£6/15/-
R6	12 to 25	2½ inch	1 inch	£12/15/-
R7	20 to 40	3 inch	1½ inch	£19/10/-
R10	25 to 100	4 inch	2 inch	£44/-/-

Larger Sizes will be quoted on application.

A further table of information concerning the "Reliance" Ram is printed on the following page.

When Ordering Pumps, please give the Information requested on page 1.

CONDITIONS AND CAPACITIES FOR "AJAX" HYDRAULIC RAMS

Gallons per hour delivered for each gallon per minute supplied to the Ram. (Multiply number of gallons supplied to the Ram per minute by the number below for any given fall and elevation—the product will be the approximate number of gallons delivered per hour.)

Fall in Feet	Elevation in Feet																						*Required Length Drive Pipe in Feet
	12	15	18	21	24	27	30	33	36	39	42	45	48	54	60	66	72	84	96	108	120	132	144	
2	5.	4.	3.3	3.	2.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10 to 20
3	...	...	5.	4.3	3.75	3.3	3.	2.7	2.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15 to 30
4	...	...	...	...	5.	4.4	4.	3.6	3.3	3.1	2.8	2.6	2.5	...	...	...	...	...	...	...	...	...	...	20 to 40
5	...	...	...	...	...	...	5.	4.5	4.2	3.8	3.6	3.3	3.1	2.8	2.5	...	...	...	...	...	...	...	...	25 to 50
6	...	...	...	...	...	...	...	...	5.	4.6	4.3	4.	3.7	3.3	3.	2.7	2.5	...	...	...	...	...	...	30 to 60
7	...	...	...	...	...	...	...	...	...	...	5.	4.7	4.4	3.9	3.5	3.2	3.	2.5	...	...	...	...	...	35 to 70
8	...	...	...	...	...	...	...	...	...	...	...	...	5.	4.4	4.	3.6	3.3	2.9	2.5	...	...	...	...	40 to 80
9	...	...	...	...	...	...	...	...	...	...	...	...	...	5.	4.5	4.1	3.8	3.2	2.8	2.5	...	...	...	45 to 90
10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.	4.5	4.2	3.6	3.1	2.8	2.5	...	...	50 to 100
11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.	4.6	4.	3.4	3.	2.8	2.5	...	55 to 110
12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.	4.3	3.8	3.3	3.	2.7	2.5	60 to 120

*Length of drive pipe should never be less than 5 times nor more than 10 times the fall, regardless of the discharge head or elevation, but may be any convenient length within these limits

K59—

Sprinkler Irrigation System

Make One Acre do the Work of Three.

This is the most efficient system of irrigation for vegetables, flowers and lucerne, etc. Used extensively on water supply mains as overhead tanks are not necessary. After one side of the line of piping has been watered, the piping may be turned completely around by means of swivel joints and the other side covered with this natural rain.

With 10 lbs. pressure the lines should be 40 ft. apart, with 20 lbs., 50 ft., and up to 45 lbs., 56 ft. With 75 lbs. and over the limit should be 50 ft. 120 ft. ¾ in. piping with nozzles fitted is quite satisfactory or 105 ft. ¾ in. and 95 ft. 1 in. piping, when the total length is 200 ft. Above 200 ft. any additional lengths should be 1¼ in. up to 500 ft. Generally 20 gallons per minute are required to operate 100 nozzles in 300 ft. "Ajax" Piping.

Our "P2 Ajax" Piston Pump discharges approximately 421 gallons per hour and will operate 231 ft. piping. "P3 Ajax" Pump, 750 gallons, 408 ft. "P4 Ajax" Pump, 1,380 gallons, 753 ft. "P5 Ajax" Pump, 1,936 gallons, 1,056 ft. "P6 Ajax" Pump, 3,600 gallons, 1,962 ft., with nozzles 3 ft. apart. The Pumps can operate a number of spray lines at the one time.

The 1 in. High Duty "Ajax" Centrifugal Pump will operate 220 sprinklers; 1¼ in., 330; 1½ in., 550; 2 in., 990; 3 in., 1,650.

The "System" may be made portable by using one, two or more lines at the one time, while another line, which has already irrigated an area 50 ft. wide (25 ft. on either side) is being disconnected and refitted on the other side of the area being watered. We can supply quick action couplings for the piping.

With 20 lb. pressure the discharge is approximately 9.083 gallons per 100 nozzles; 30 lb., 15.33; and 40 lb., 16.5 gallons, per minute.

Skinner type Nozzles, 2/- doz. or 150 for £1/-/-.

Combination Drill and Tap for putting holes in your piping, 5/- each.

K60—GALVANISED IRRIGATION PIPE

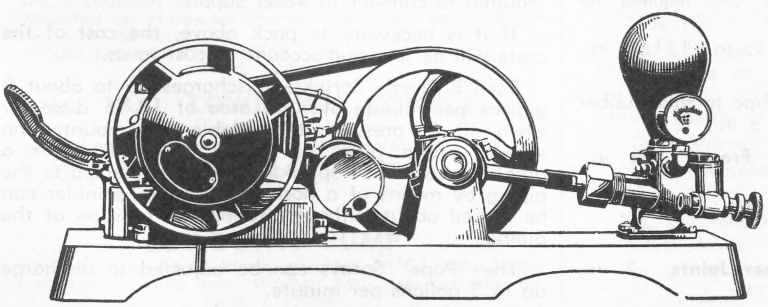
Riveted and Flanged Irrigation Pipe, in 17 ft. 9 in. lengths.

Sizes 3 in. and upwards, 16 to 20 gauge.

Prices on application.

Bends for above also stocked.

K61— "Bantam" Self-Contained Semi-Portable Fruit Spraying Outfit



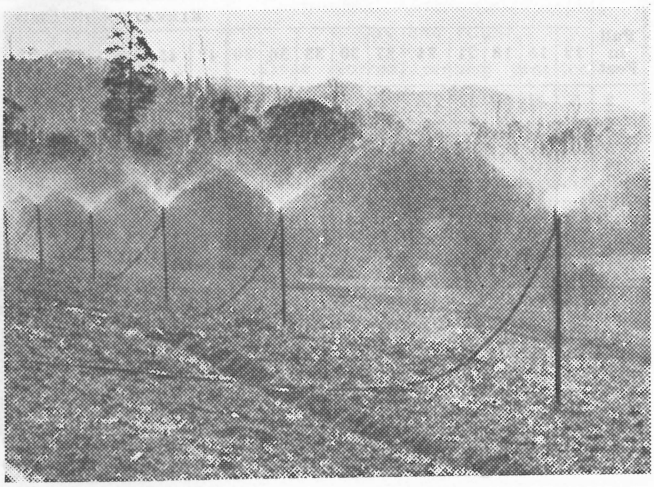
A small, powerful, completely self-contained pressure outfit; has simple, reliable petrol engine; pump delivers up to 200 lbs. per square inch and over 80 gallons an hour; weighs only 120 lbs.; occupies space only 40 in. by 12 in.; easily portable on waggon, dray or sledge.

When Ordering Pumps, please give the Information requested on page 1.

K62—

"Butterfly" Sprinkler Irrigation System

There are no screwed joints, no wing nuts or pins, but a perfectly secure and watertight joint is made by half a turn of the clamp, which is self-locking. The smaller size pipes are of 24 gauge galvanized iron; heavier iron being used according to size for the larger. They are set up in 12 ft. lengths in stock sizes of 2 in., 2½ in., 3 in. and 4 in. diameter. Quotation for larger sizes on application. Well seamed and soldered, the pipes are strongly riveted and fitted with special standardised beaded ends to take the rubber connections.



The pipe connections, being of strong rubber fabric, are unbreakable and flexible. They can be mounted on posts or suspended on wires without the slightest fear of the joints breaking or leaking.

The capacity of each Sprinkler is approximately 180 gallons per hour and 30 foot pressure is required to operate. They will cover a diameter of 24 feet, and if a more extensive watering is required, we can supply the piping with Sprinklers 12 feet apart instead of 24 feet.

The water may be pumped straight into the service or through a larger main supplied with laterals for which proper connections are provided.

This system will work equally well by gravity or pump feed. For conveying water only, as with main pipes, the piping can be supplied without sprinklers at slightly reduced cost.

K63—

LIGHT PORTABLE 24-GAUGE IRRIGATION PIPING AND FITTINGS.

MAIN PIPES per 18 ft. length with one rubber joint and one quick action and one ordinary clip. 2 in., 22/-; 2½ in., 25/-; 3 in., 27/-.

MAIN PIPE with one Butterfly Spray, and up to 24 in. pipe standard. 2 in., 25/6; 2½ in., 30/-; 3 in., 32/6.

SPRAY PIPES as above with two "Pope" Sprays. 2 in., 23/-; 2½ in., 26/-; 3 in., 28/6.

Approximate weight — Lbs. per length — 2 in., 12½; 2½ in., 15½; 3 in., 18.

"POPE PATENT QUICK DETACHABLE CLIPS. 2 in., 1/9; 2½ in., 2/3; 3 in., 2/6 each.

ORDINARY CLIPS. 2 in., 1/6; 2½ in., 2/-; 3 in., 2/3.

One Patent and one Ordinary Clip required for each joint.

RUBBER JOINTS. 2 in., 9d.; 2½ in., 1/1; 3 in., 1/3.

BRASS EXTRA ENDS for Down Pipe to take rubber joints. 2 in., 10d.; 2½ in., 1/1; 3 in., 1/3.

"BUTTERFLY" SPRAYS, Fixed Frame. ½ in., 1/6; ¾ in., 1/9.

Revolving Frame. ½ in., 2/8; ¾ in., 2/11.

"POPE" SPRAYS. 1/3 each.

"POPE" BENDS, Without Rubber Joints. 2 in., 4/-; 2½ in., 4/6; 3 in., 5/6.

With Rubber Joints and Clips. 2 in., 8/-; 2½ in., 9/-; 3 in., 10/6; 1 joint and 2 clips.

"POPE" TEES Without Rubber Joints. 2 in., 6/6; 2½ in., 7/6; 3 in., 8/6.

With Rubber Joints and Clips. 2 in., 14/-; 2½ in., 17/6; 3 in., 19/-; 3 joints and 3 clips.

"POPE" CROSSES Without Rubber Joints. 2 in., 6/6; 2½ in., 7/-; 3 in., 8/6.

With Rubber Joints and Clips. 2 in., 17/9; 2½ in., 21/6; 3 in., 25/-; 4 joints and 4 clips.

"POPE" STOPS ENDS on Ordinary Malleable Cap. 1 point and 2 clips.

"POPE" ADAPTORS — according to what is required to connect to water supply.

If it is necessary to pack above, the cost of the crate will be for your account at cost to us.

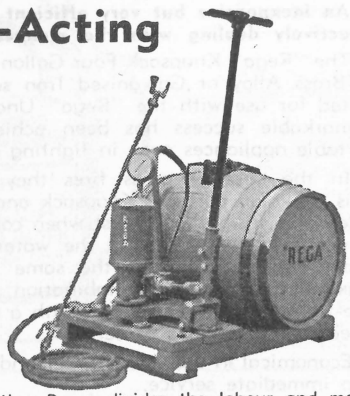
Each Butterfly Sprinkler discharges up to about 3 gallons per minute over an area of 18 ft. diameter when 30 ft. pressure is available. If mounted on vertical stand pipes or hoses, they will cover a greater area. Each Sprinkler can be connected to the piping by means of a hose so that the Sprinkler can be moved about without altering the position of the piping.

The "Pope" Sprays can be adjusted to discharge up to 5 gallons per minute.

When Ordering Pumps, please give the Information requested on page 1.

K64—

"REGA" No. 1 Low Down High Pressure Double-Acting Barrel Spray Pump



For use with barrel or any other kind of receptacle.

The Double Acting Pump divides the labour and makes easy work of a hard, tiresome job.

The Pump and Cylinder are of the Rocking type, which gives a direct throw to the Plunger Rod, doing away with the friction, wear, tear, and breakage of sliding crossheads and guides.

The Plunger Rod is solid brass, the Plunger Bucket is fitted with two die-formed cupped leathers.

The Pump Cylinder is lined with a heavy gauge solid-drawn brass tube; the Valves, Valve Cages, Caps, and Plunger are made from hard wearing gun-metal. The Ball Valves, phosphor bronze.

Four brass Drain Cocks are fitted to the Cylinder to run the water off where damage from frost is feared.

The Suction Hose is of ample length, 5 ft. x ¾ in. x 4-ply.

The Suction Strainer is strong and easily dismantled by means of bayonet catches.

The Agitator is mechanical, fixed to the barrel as illustrated, and to the handle by a Link, works backward and forward at each stroke of the Pump, the whole being detachable.

The 45-gallon Barrels supplied with Models 1A and 1BC are strong and serviceable, having a brass hinged flap cover to the filling aperture.

Test.—Every machine is subjected to a guaranteed gauge glass pressure test of 300 pounds per square inch.

No. 1 LOWDOWN STANDARD

Double Acting Barrel Pump.
Mounted on C.I. Base Plate.
Suction Hose.
Mechanical Agitator.
2 Hose Nuts and Tails.
1 pair "Staythere" Hose Clips.
"Rega" Cyclone Duplex Nozzle.
Air Chamber.
Pressure Gauge.
Strainer.
1 Hose Male Tail.
Drip Guard.
Universal Key.

Price, £19/16/-

No. 1A LOWDOWN MOUNTED

No. 1 Lowdown Standard Outfit.
Mounted on Hardwood Platform with 45 gallon Barrel fitted with Tie Rods.
Hinged brass cover to filling hole.

Price, £24/15/-

No. 1B.C. LOWDOWN COMPLETE

As illustrated.
No. 1 Lowdown Standard, Mounted as No. 1A.
Complete with 1 Hose Line, 20 ft. x ½ in.
Extension Rod, 9 ft. x ¼ in. pipe.
No-Drip Stop Cock.

Price, £26/5/-.

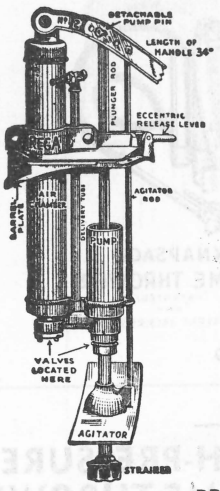
LOWDOWN PUMP

Double-Acting Barrel Pump, mounted on C.I. Base Plate; air chamber, suction hose, strainer, key, hose nut and tail.

Price, £16/10/-

K65—"REGA" No. 2 BARREL SPRAYER

The chief essentials in a Barrel Sprayer are a good pump, easy to get at, with a properly designed plunger. High compression valves capable of withstanding the hard work valves have to do. A strong Air Chamber, with ample space and elasticity to hold sufficient liquid to keep two lines of hose going, without exertion; an Agitator, which can be used independent of the pump for thoroughly mixing the solution before it is sprayed.



STANDARD EQUIPMENT

No. 2 "Rega" Barrel Sprayer. Instant Release Barrel Plate (for side or end of barrel). Hose Nuts and Tails (two). Cyclone Duplex Nozzle. Drip Guard. Hose Male Tail. Code Word: "YUGIT."

PRICES:

No. 2, Standard. Pump only.
Code Word, "BARSPRAY." Price, £7/11/9

No. 2 "Rega" Barrel Spray, Complete with hose, 15 ft. x ½ in.; extension pipe, 9 ft. x ¼ in.; cut-off tap; drip guard; Cyclone-Duplex nozzle, without Barrel or Skids.
Code Word, "NOBAR." Price, £8/16/6.

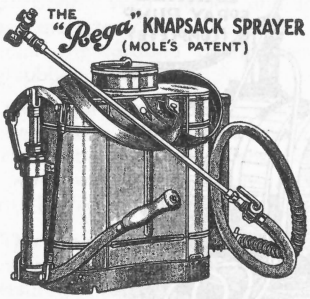
No. 2, Complete on Barrel End, No Skids.
Code Word, "BAREND." Price, £10/6/-.

No. 2, Complete Outfit.
Code Word, "RELBAR." Price, £12/10/9

No. 2, All Brass Pump.
Code Word, "REBBRASS." Price, £1/4/9 extra.

When Ordering Pumps, please give the Information requested on page 1.

K66



K67

K68

K69

K66—
"REGA" FIRE FIGHTING OUTFIT

An inexpensive but very efficient combination for effectively dealing with the menace of bush fires.

The "Rega" Knapsack Four Gallon Container made of Brass Alloy or Galvanised Iron supplied as illustrated for use with the "Rega" Under-arm Sprayer. Remarkable success has been achieved with these portable appliances even in fighting great bush fires.

In the case of grass fires they are invaluable. This one-man portable Knapsack and Pump is available at an insignificant cost when compared with the value of its work, jetting the water on to the fire under high pressure, at the same time giving the maximum spread — a combination of efficiency in fire-fighting whether dealing with a haystack, house, wheat-crop, pastures or scrub.

Economical in the use of water and may be brought into immediate service.

Galvanised 49/–
Brass 59/3
Under Arm Pump only 21/9

K67—
"REGA" LEAD-COATED KNAPSACK SPRAYER

For Sulphuric and Other Acids.

This is without doubt the finest Knapsack of its kind in the world. The lever system employed gives tremendous power with ease of action, and high pressure. An important feature is the patent overflow valve above the plunger, which does away with the unpleasant leakage of liquid from the stuffing box, which usually finds its way to the operator's clothes.

You can spray any mixture in these containers, even acids.

Capacity, 3¼ gallons.
Price, £6/3/6, without backrest.
Patent Backrest, as illustrated, 6/- extra.
With Brass Containers, £5/11/6.

K68—
"REGA" PNEUMATIC KNAPSACK SPRAYER

Designed to give the best service, and made in special brass alloy. Seams double locked, riveted and soldered. Special attention is drawn to the new improved combined Pump and Locking Device, simple in construction, powerful and effective in operation.

Another feature—the "Rega" Air Lock Tube—is incorporated in the Container—a new departure for this type of sprayer. You cannot fill the container too full of liquid—it is air retaining. The "Rega" Air Lock is the safety factor. Every outfit is tested to 60lbs. pressure. Full instructions for operating with each sprayer.

Capacity, 3 gals. Size, 7 in. x 20 in. Net Weight, 9 lbs.

As illustrated, Price 74/3. Lead coated, 95/10.

K69—
"REGA" HIGH-PRESSURE KNAPSACK FLAME THROWER

For the control and eradication of noxious weeds (blackberry, lantana, gorse, etc.) and pests.

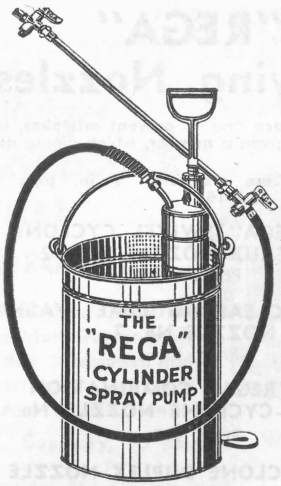
Destruction depends on two factors — the intense heat of the flame and the deposit of hot unburnt oil. The "Rega" Flame-thrower projects a fierce flame through which travels a fine spray of hot oil, consuming stalk, leaf, flower and seed while **green.**

ECONOMY in OPERATION: The consumption of oil with the "Rega" Flame-thrower is only 2½ gallons per hour of continuous operation.

SAFETY: It is perfectly safe to operate, as the fuel oil container is not under pressure.

Price, £8/15/-.

When Ordering Pumps, please give the Information requested on page 1.



K70— "REGA" CYLINDER SPRAY PUMP

Splendid FIRE FIGHTER in Home, Store, Factory, etc.

With adjustable Agitator and other features. Made of special Brass Alloy throughout. Securely fixed in a heavy galvanised 4 gall. Bucket. The large Compression Cylinder ensures a continuous and powerful spray. Suitable for use with all ordinary spraying mixtures.

It has a large Air Cylinder, 14 in. by 3½ in. diameter, in which a large quantity of liquid can be stored up under pressure and discharged at will without pumping.

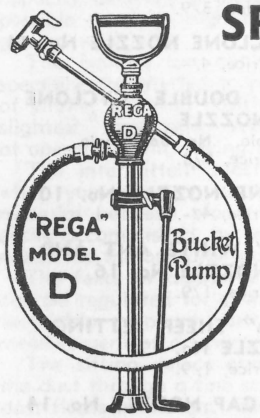
The pump, 18 in. by 1½ in. diameter, is a very powerful and single action one built into the cylinder. The valves are solid brass, ground-in to high compression standard.

The Compression Valve is easily removed in case of trouble, by unscrewing the inspection cover of valve housing at bottom of cylinder.

Complete as illustrated. Hose: 5 ft. x 3-ply detachable. Lance: 2 ft. with Stop Cock. Nozzle: The famous "Rega" Bordeaux Cyclone (Mole's Patent). Suitable for spraying under leaves of ground plants.

Code Word: "YUREF." Price, 82/6.

K71—BUCKET SPRAY PUMPS



Suitable for the Garden, Small Orchard, Poultry Farm, Garages, Lime and Whitewashing, etc.

Model D (as illustrated), 22/6.

Model B, 27/6.

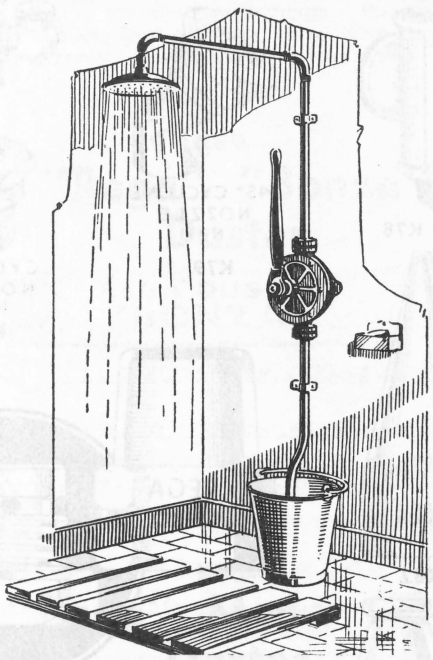
Model A, 29/6.

Model A.1, 36/-

Prices do not include Bucket.

Code Word: "YURDA"

K72—"AJAX" BUSH SHOWER

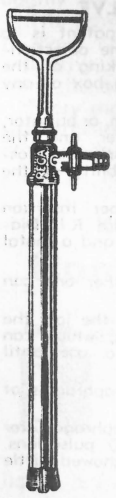


This outfit is proving very popular in the country, where the supply of water is limited; also very popular in Shearing Sheds. A semi-rotary pump gives just the right flow, and does not cause undue waste of water. Very easily erected, and can be shifted to any desired spot with the least trouble.

Price, with ½ in. fittings, 37/6. Code word, "YOREZ."

With ¾ in. fittings, 42/6. Code word, "YORIB."

Price does not include bucket.



K73— BILGE PUMP

DISCHARGES SIX GALLONS PER MINUTE. BRASS THROUGHOUT.

A very useful article in the boat shed. Strong and serviceable. Supplied, as illustrated, complete with union for one inch hose.

Solid drawn brass cylinder, 1½ in. x 16 in. Highly polished and lacquered. Foot valve detachable with strainer.

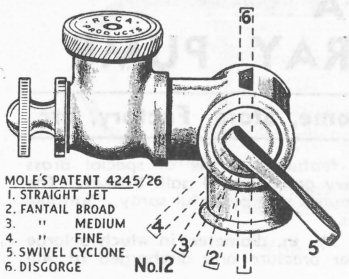
A better and quicker method for baling out water.

Code Word. "YUCYT."

Price, 27/6.

When Ordering Pumps, please give the Information requested on page 1.

"REGA" SWIVEL CYCLONE-BORDEAUX NOZZLE

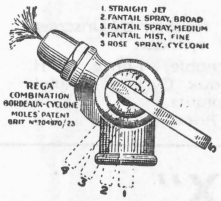


K74

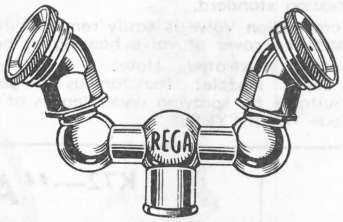
SELF-CLEANING LIME WASHING NOZZLE

No. 7

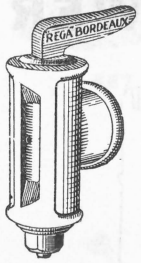
K75



K76



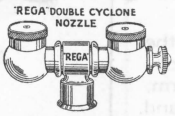
K77



K78

45° CYCLONE NOZZLE No 11

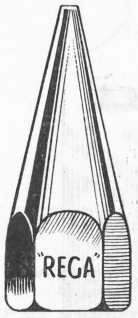
K79



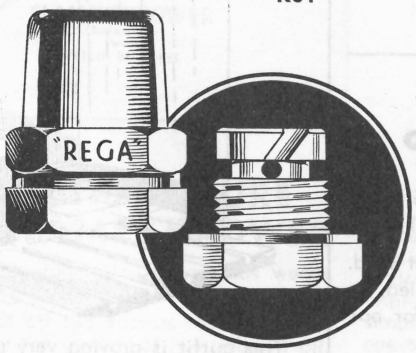
K80

CYCLONE NOZZLE No 10

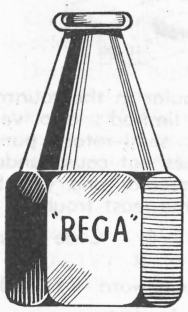
K81



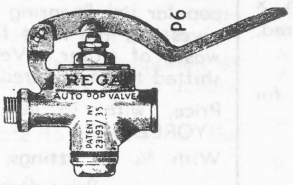
K82



K84



K83



K85

"REGA" Spraying Nozzles

For **convenience** and to **prevent mistakes,** each Nozzle is now given a **number,** which please **quote** in ordering.

All threads are standard ¼ in. pipe size except Nos. 14 and 16.

K74—"REGA" SWIVEL CYCLONE-BORDEAUX NOZZLE No. 12
Price, 8/3.

K75—SELF CLEANING LIME WASHING NOZZLE No. 7
Price, 5/-.

K76—"REGA" COMBINATION BORDEAUX-CYCLONE NOZZLE No. 4
Price, 5/9.

K77—CYCLONE DUPLEX NOZZLE No. 9
Price, 11/6.

K78—"REGA" BORDEAUX NOZZLE No. 5
Price, 3/9.

K79—45 in. CYCLONE NOZZLE No. 11
Price, 4/-.

K80—"REGA" DOUBLE CYCLONE NOZZLE
No. 3, Double. **No. 3a,** Single.
Price, 9/3.

K81—CYCLONE NOZZLE No. 10
Price, 4/-.

K82—"REGA" WHITE ANT AND BORER NOZZLE No. 16
Price, 1/9.

K83—"REGA" SHEEP JETTING NOZZLE No. 17
Price, 1/9.

K84—"REGA" CAP NOZZLE No. 14
Price, 1/-.

K85—"REGA" LEAKLESS AUTOPOP INSTANT CUT-OFF VALVE

The object of this new "Rega" patent is to open and close the valve without the objectionable and sometimes dangerous leaking of the liquid through the use of a stuffing box of any kind.

The patent consists of a diaphragm, or pulsator, interposed between the valve lifter and the oscillator, thereby effecting the opening and closing of the Valve without the possibility of the liquid escaping.

The Valve is fitted with a Rubber Insertion Diaphragm for general use. A spare R.I. Diaphragm is sent out with each Valve and a metal one for use with Oil.

In emergencies a home-made leather one can be cut and used.

To assist users in a breakdown on the job, the valve is fitted with a stuffing box, which can be tightened up and brought into use until another Diaphragm is fitted.

You are advised to carry spare Diaphragms of the kind mostly in use.

Under actual test the metal Diaphragm, for use with oil, gave way after 6,000 pulsations. The Rubber Insertion Diaphragm showed little signs of wear after 8,000 pulsations.

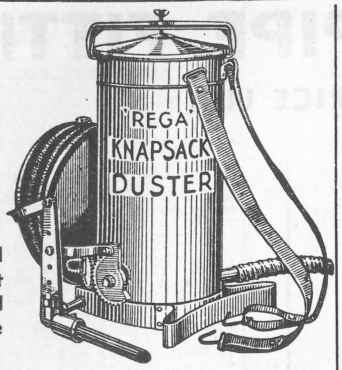
Price, 9/3 each.

When Ordering Pumps, please give the Information requested on page 1.

"REGA" DUST SPRAYERS

K86—

"Rega" Knapsack Dust Sprayer



The most powerful One-Man Duster built to-day. Designed and constructed to give perfect satisfaction.

Capacity, 15 pounds. Weight, 18 pounds.

Equipment: two 12 in. Extension Tubes and Spoon Spreader for ground work; 1 in. x 2 ft. 8 in. wire-wound Air Hose, that will not kink, crack, or break.

The "Rega" Knapsack Dust Sprayer is a force-fed machine. The 600 cubic inch bellows capacity develops a **most powerful drive,** making it possible to reach high trees or cover wide areas on ground work.

The bellows are not hinged: the diaphragm is specially constructed to move with the entire length of stroke, ensuring positive and instant control; the slightest movement serves to control the dust at operator's will, saving time and material.

The intermittent blast puts the dust where and when you want on spot dusting, with no loss of material between plants, and a continuous flow is easily accomplished by a sweeping motion of the nozzle as the operator walks along.

The feed, or discharge, is simple and effective—can be regulated for a wide range of action, from a very thin, vapoury dust to a dense cloud. The measurement of discharge is accurate and constant.

The sifting device **crushes lumps** and **force-feeds** the dust through a fine screen, so that the discharged dust floats in the air. **No lumps are passed.**

It will satisfactorily handle heavy nicotine-sulphur dusts, or other moist materials that are not thoroughly dry.

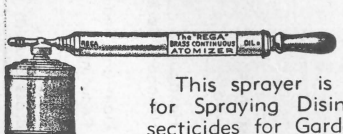
The power and force of the blast drives the dust to every crevice and into tightly curled leaves, and will drive the cloud to a distance of 20 to 25 feet from the nozzle end.

Every machine is packed in a strong wooden case, with full instructions how to set up, care of machine, etc. Code Word: "YURAD."

Price, as illustrated, with brush and spiral, £5/8/-.

K87— "Rega"

Continuous Atomizer

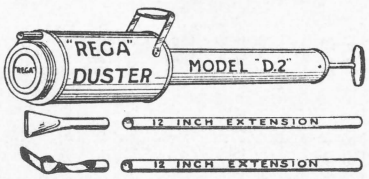


Code Word, "YUFWY."

This sprayer is specially designed for Spraying Disinfectants and Insecticides for Garden and Household Use. The atomiser and container, and all points of contact with the liquid, are of solid brass. Price, 8/3 each. Lead-coated, 9/- each.

K88—

"Rega" Model "D.2." Hand Duster



With a capacity for holding 4 lbs. of Dust, it will often save the buying of a large machine. Made from heavy tinned steel sheets for hard wear, it is a very powerful machine for spraying all kinds of Dust and Powder Insecticides, and the like, throwing a splendid cloud of fine dust, and is easy and comfortable to operate.

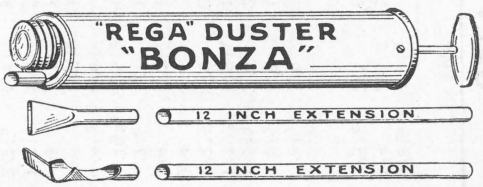
Supplied as illustrated, with graphite for lubricating the plunger (Powder and apply in small quantities through hole in wood plug.)

Container 5 in. dia. x 9 in. Capacity, 4 lb. Fitted with Strainer for uniform discharge. Pump 2¾ in. dia. x 12 in. long with air valve to prevent dust entering pump. Plunger easy to take apart.

Price, 16/6.

K89—

"Rega" "Bonza" Duster

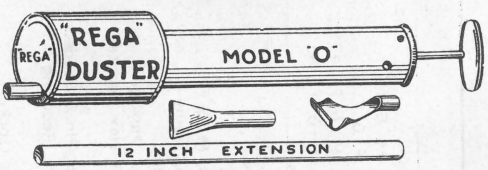


Container 2¾ in. dia. x 4¼ in. Capacity, ¾ pint. Pump 2¾ in. dia. x 8½ in. Air Valve fitted.

Price, 5/9 ea.

K90—

"Rega" Model "O" Duster



Container 2¾ in. dia. x 3½ in. Capacity, ½ pint. Pump 1⅞ in. dia. x 8 in. long. Detachable for filling. Price, 4/3 ea.

When Ordering Pumps, please give the Information requested on page 1.

MALLEABLE PIPE FITTINGS

K91—

TRADE PRICE LIST

GALVANIZED

		1/8" 1/4" 3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"
Backnuts	ea.	–/2	–/2	–/3	–/3¼	–/4½	–/6	–/9¼	1/6½	2/5¾	3/4	4/4¼	8/8½	13/0¾
Bends, M. & F.	,,	–/6½	–/8	–/10½	1/4	2/3¼	3/2½	4/8	10/2	15/2¾	21/9	30/5½	63/1	94/3
Bends, F. & F.	,,	–/6½	–/8	1/–	1/5¾	2/5	3/7¼	5/4	—	—	—	—	—	—
Bends, M. & F., 45°	,,	—	–/8¾	–/11¾	—	—	—	—	—	—	—	—	—	—
Bends, F. & F., 45°	,,	—	–/9¾	1/1½	—	—	—	—	—	—	—	—	—	—
Bushes	,,	—	–/3¼	–/5	–/6½	–/9	–/11¼	1/9	3/3¼	5/1	6/10¾	8/8½	15/11½	24/7¾
Caps	,,	–/2½	–/3¼	–/5	–/6½	–/9	1/–	1/6½	2/11	4/4¼	6/6½	7/11¾	—	—
Crosses	,,	–/7¼	–/9	1/1	1/5¾	2/–	2/5¾	4/–	—	—	—	—	—	—
Elbows	,,	–/5	–/6½	–/9	1/1	1/5¾	1/9¾	2/9¾	6/6½	10/2	13/0¾	17/5	—	68/2
Elbows, M. & F.	,,	–/5¾	–/7¼	–/10½	1/2½	1/8	2/2	3/4	—	—	—	—	—	—
Elbows, 3-way	,,	—	1/1½	1/9¼	2/4	—	—	—	—	—	—	—	—	—
Flanges	,,	–/8	–/9¾	1/1	1/4	1/7¼	1/10½	2/5¾	4/–	6/9¾	8/–	9/2½	—	21/7¼
Nipples, Hexagon	,,	–/3	–/4½	–/6	–/7¾	1/1	1/4	2/–	3/11	6/3¼	7/8½	10/10½	—	—
Nipples, Hex. Reduced	,,	—	–/6¼	–/8¾	–/10¾	1/5¼	1/11	2/9¾	—	—	—	—	—	—
Plugs	,,	–/1¾	–/2	–/3¼	–/4½	–/6	–/8	–/11¼	2/4¾	3/7½	5/1	6/6½	—	—
Sockets, Pln. & Beaded	,,	–/3	–/4	–/5¼	–/7	–/9¼	1/0½	1/6½	3/2	3/7¼	5/5	6/3¾	—	—
Sockets, Reducing	,,	–/3¼	–/4½	–/6	–/8	–/11¼	1/2½	1/9¾	3/5¾	5/7	7/6¼	—	—	—
Tees	,,	–/5¾	–/7¼	–/10½	1/2½	1/8	2/1	3/4	7/3	11/7¼	15/2¾	19/11¼	—	78/3¾
Unions (Socket)	,,	1/2½	1/5½	1/9¾	2/2¼	2/11	3/10½	5/5¼	11/7¼	18/10¼	27/6¾	—	—	—
Unions (Brass Seated)	,,	—	—	—	3/2	—	5/7¼	7/10½	—	—	—	—	—	—

BLACK

		1/8" 1/4" 3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	6"
Backnuts	ea.	–/2	–/2	–/2¾	–/3	–/4¼	–/5¾	–/8¾	1/5¼	2/3¾	3/1½	4/0¾	12/2
Bends, M. & F.	,,	–/6	–/7½	–/9¾	1/3	2/1½	3/–	4/4½	9/5½	14/2¼	20/3	28/4¼	87/9
Bends, F. & F.	,,	–/6	–/7½	–/11¼	1/4½	2/3	3/4½	5/–	—	—	—	—	—
Bends, M. & F., 45°	,,	—	–/8¼	–/11	—	—	—	—	—	—	—	—	—
Bends, F. & F., 45°	,,	—	–/9	1/0¾	—	—	—	—	—	—	—	—	—
Bushes	,,	–/2¼	–/3	–/4½	–/6	–/8¼	–/10½	1/7½	3/0½	4/8¾	6/5	8/1¼	22/11½
Caps	,,	–/2¼	–/3	–/4½	–/6	–/8¼	–/11¼	1/5½	2/8½	4/0¾	6/1	7/5¼	—
Crosses	,,	–/6¾	–/8¼	1/–	1/4½	1/10½	2/3¾	3/9	—	—	—	—	—
Elbows	,,	–/4½	–/6	–/8¼	1/–	1/4½	1/8¼	2/7½	6/1	9/5½	12/2	16/2½	—
Elbows, M. & F.	,,	–/5½	–/6¾	–/9¾	1/1½	1/6¾	1/11¼	3/1½	—	—	—	—	—
Elbows, 3-way	,,	—	1/0¾	1/8	2/2¼	—	—	—	—	—	—	—	—
Flanges	,,	–/7½	–/9	1/–	1/3	1/6	1/9	2/3¾	3/9	6/4½	7/6	8/7½	20/3
Nipples, Hexagon	,,	–/3	–/4¼	–/5½	–/7¼	1/–	1/3	1/10½	3/7¾	5/9¾	7/2	10/1½	—
Nipples, Hexagon, Reduced	,,	–/5	–/6	–/8¼	–/10	1/4¼	1/9¾	2/7½	—	—	—	—	—
Plugs	,,	–/1½	–/2	–/3	–/4¼	–/5¾	–/7½	–/10½	2/2¾	3/4½	4/8¾	6/1	—
Sockets, Plain and Beaded	,,	–/2¾	–/3¾	–/5	–/6½	–/8¾	–/11¾	1/5¼	2/11¾	3/5	5/1¼	5/11½	—
Sockets, Reducing	,,	–/3	–/4¼	–/5¾	–/7½	–/10½	1/1½	1/8¼	3/3	5/2½	7/0¼	—	—
Tees	,,	–/5½	–/6¾	–/9¾	1/1½	1/6¾	1/11¼	3/1½	6/9	10/9¾	14/2¼	18/6¾	72/11
Unions (Socket)	,,	1/1½	1/4¼	1/8¼	2/0½	2/8½	3/7¼	5/0¾	10/9¾	17/6¾	25/8	—	—
Unions (Brass Seated)	,,	—	—	—	3/–	—	5/4	7/6	—	—	—	—	—

When Ordering Pumps, please give the Information requested on page 1.

Piping and Fittings for Pumps

	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	1¾ in.	2 in.	2½ in.	3 in.	4 in.
Gal. W.I. Pipe in stock length 18/20 ft. say 20 ft. length	5/2	6/4	8/8	12/2	15/6	—	20/8	31/10	36/7	72/11
Per 100 ft.	25/9	31/8	43/4	60/11	77/4	—	103/1	159/4	182/10	364/5
Extra, Cutting and Screwing Special Lengths	8d.	9d.	11d.	1/4	1/10	—	2/6	5/4	6/6	8/–
Gal. Bend, each	7¾d.	9¾d.	1/1¾	1/10	2/2½	—	3/7½	8/4¾	12/7¼	32/6
Footvalve, each	—	3/5	3/6	4/–	5/9	—	8/–	12/–	15/6	27/–
Suction Hose, Smooth Bore, Wire Embedded, per ft.	—	—	2/5	3/4	3/10	4/5	4/11	6/6	4 ply 8/11	4 ply 11/11
Delivery Hose	6½d.	10d.	1/2	2/–	2/3	2/11	3/4	4/2	4/11	4 ply 8/1
Canvas Hose, per ft.	6d.	6d.	7d.	9d.	10d.	—	1/1	1/4	1/6	2/3
Hose Clips, each	3d.	3d.	5d.	10d.	11d.	1/3	1/6	2/6	3/6	4/6
Gate Valves, Gunmetal, each	5/6	6/6	8/6	10/9	13/–	—	17/6	35/–	47/6	—
Main Cocks, T Head, Brass, each	2/9	3/9	5/2	—	—	—	—	—	—	—
Swing Check Valves, Gunmetal, each	6/–	8/6	11/–	13/–	16/3	—	22/–	45/–	65/–	—
Relief Valve, Gunmetal	20/–	25/–	30/–	37/6	49/–	—	60/–	—	—	—
Bib Cock, Low Pressure	2/7	2/9	3/8	—	—	—	—	—	—	—
Bib Cock, For Hose	4/2	4/6	8/1	—	—	—	—	—	—	—
Tank Cock	2/6	2/8	3/10	—	—	—	—	—	—	—
Wrench, Pipe	—	—	—	—	6/9	—	9/6	14/9	—	—

Square or Twisted Greasy Cotton Packing, 3/9 lb.

SALES TAX. WHERE APPLICABLE, MUST BE ADDED TO ALL PRICES ON THIS PAGE

PRICES MAY BE CHANGED WITHOUT NOTICE

McPherson's Proprietary Limited

YOUR MONEY BACK IF NOT SATISFIED

Catalogue P 40

PUMPS

FOR ALL

PURPOSES

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